



5

4

 $\triangle 2$ 3

DO NOT SCALE

CHANGES TO THIS DRAWING SHALL BE MADE
12865.R ON CADD ONLY.
10-09-96 LATEST CADD UPDATE: 03-10-09
SBG BY: G. BATCHELOR 02:00 PM

2
$$X-1$$

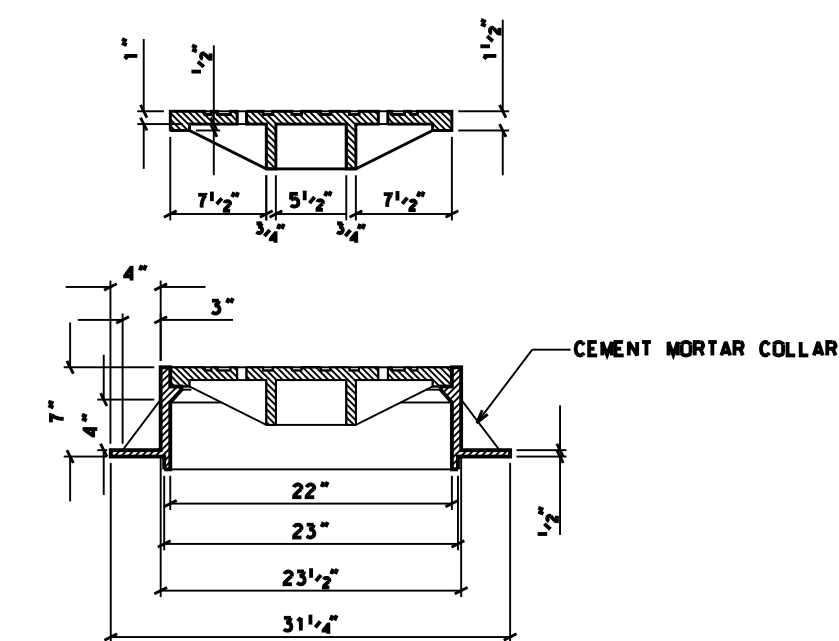
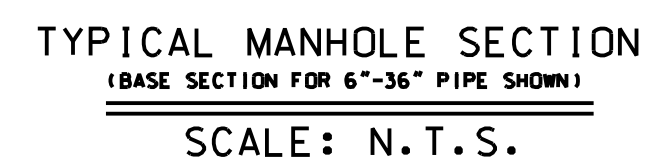
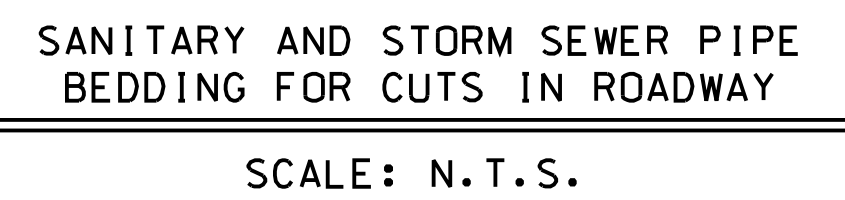
OF 1

ADT	DATE	06-24-97	ADT	DATE	06-25-97
APPROVAL RECOMMENDED: ARTHUR HARGROVE JR			DWG NO.		

DATE:	06-25-97
DWG NO.	

FAC-FQ-4707-X1

SHEET 1 OF 33



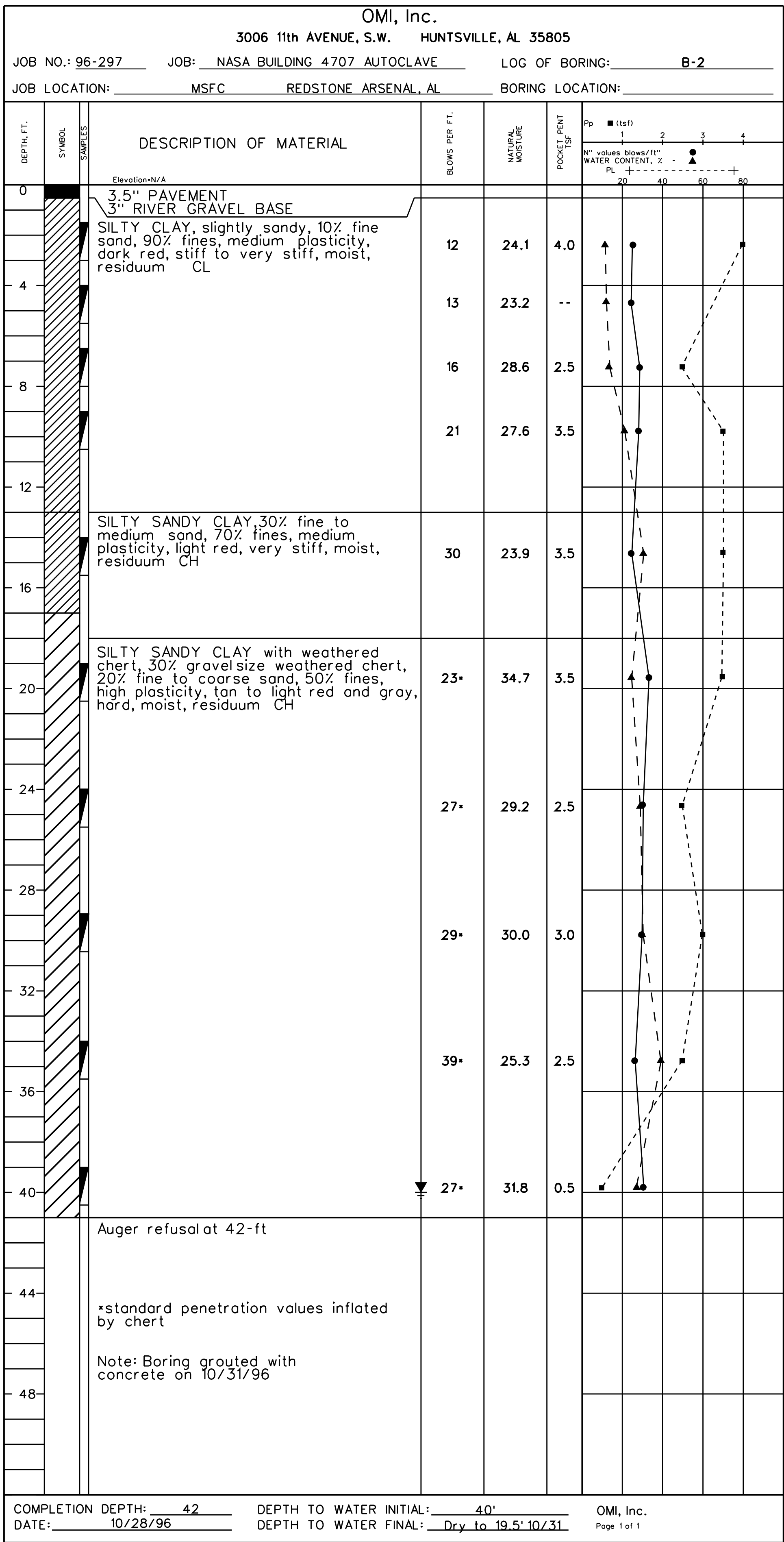
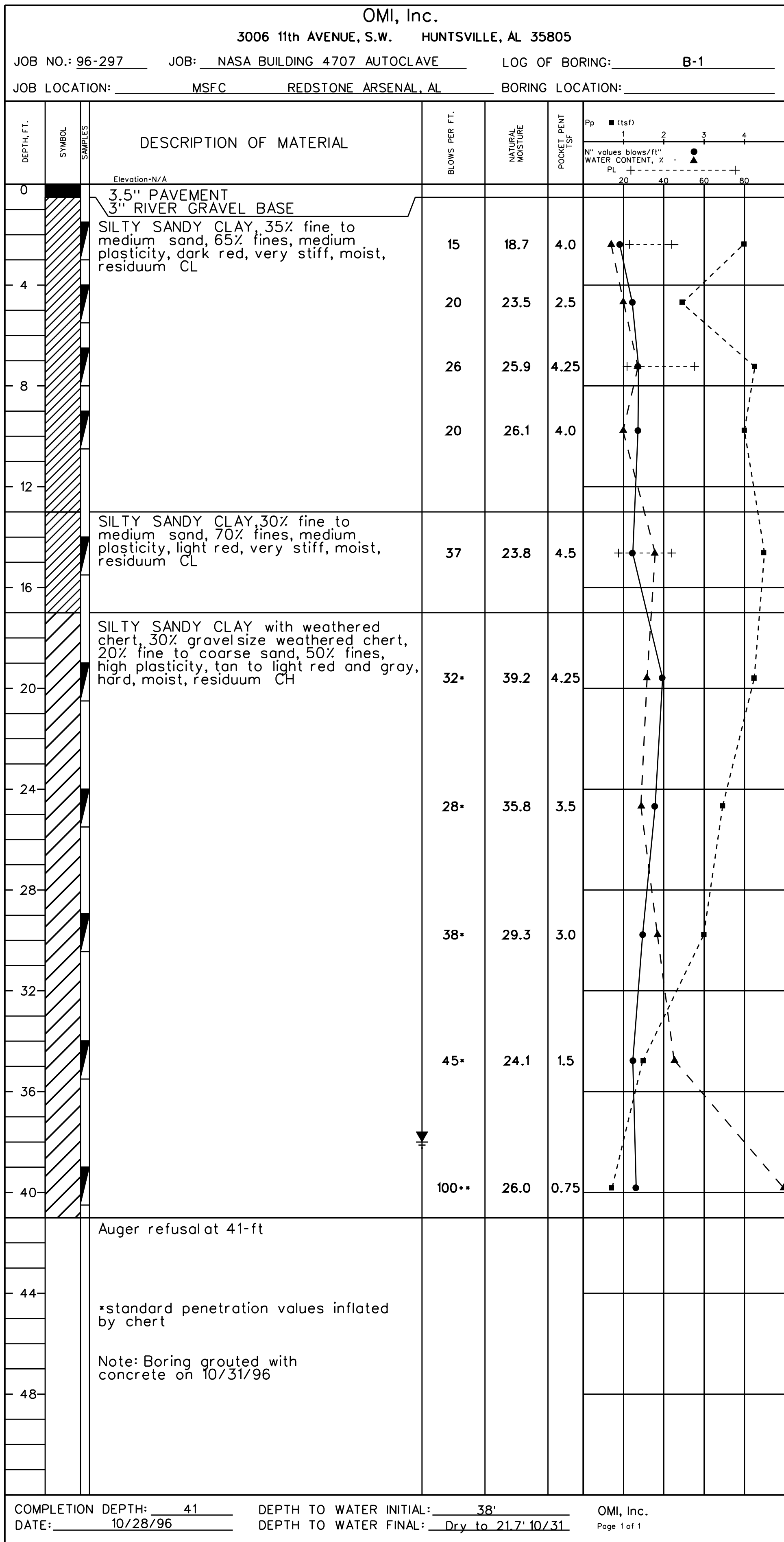
REDUCED SIZE DRAWING

DO NOT SCALE

CADD DRAWING.

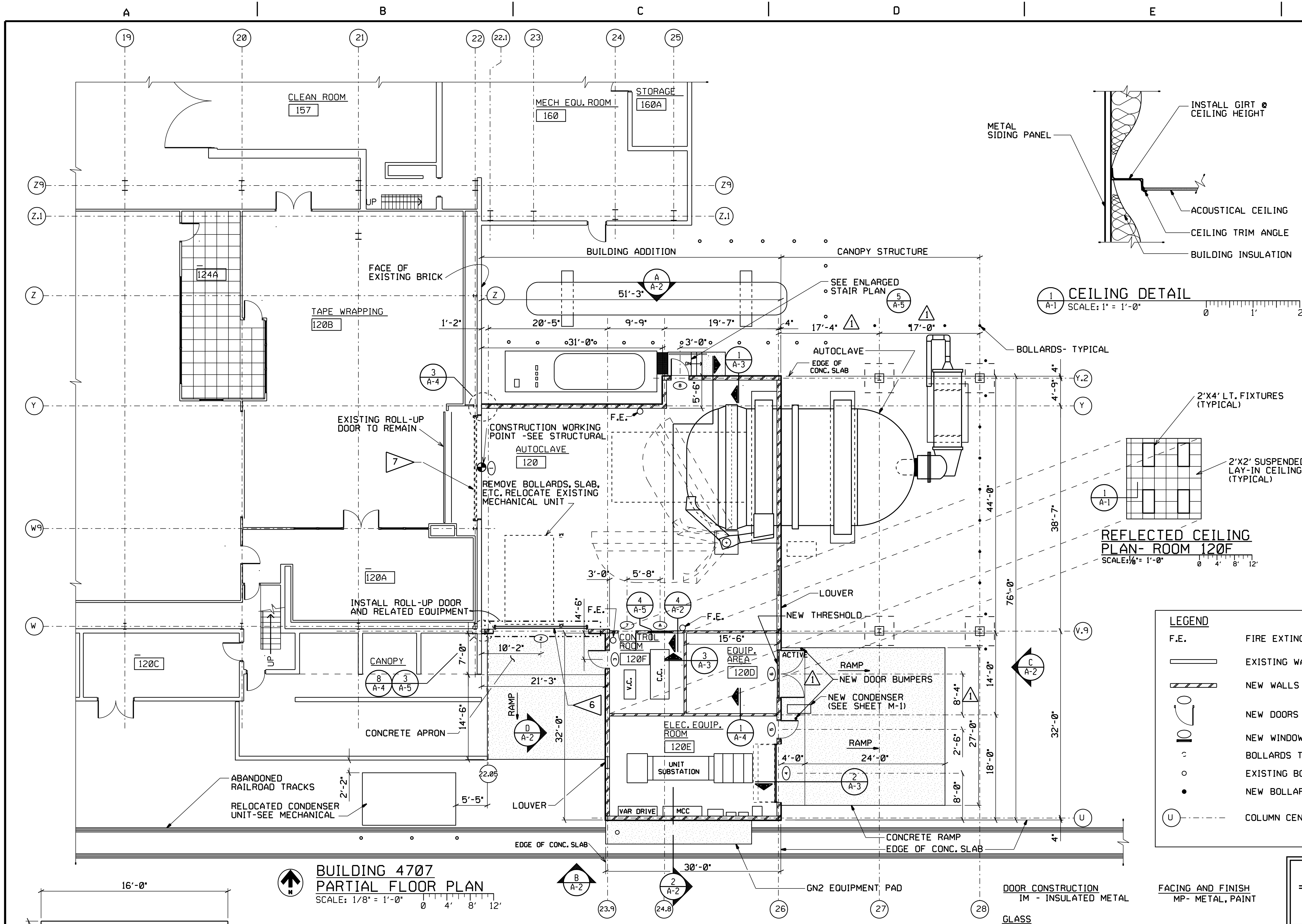
CHANGES TO THIS DRAWING SHALL BE MADE
1286-5.R ON CADD ONLY.
10-23-96 LATEST CADD UPDATE: 03-09-09
WDG BY: G. BATCHELOR 04:00 PM

[illegible]



NOTE: These boring records contain both factual and interpretative information. On this basis, the information provided is to be used for estimation and preliminary evaluation purposes only. While it is anticipated that these borings are representative of the soil strata in this area, it is not a known fact. Therefore, it could be possible for the contractor to encounter conditions different than those anticipated without prior knowledge from the design engineer or the geotechnical engineer.

REDUCED SIZE DRAWING		CADD DRAWING.	
DO NOT SCALE		CHANGES TO THIS DRAWING SHALL BE MADE ON CADD ONLY.	
10-23-96 WDG		LATEST CADD UPDATE: 03-09-09 BY: G. BATCHELOR 04:00 PM	
CONCURRENCE: / / / /		CONCURRENCE: / / / /	
CONCURRENCE: / / / /		CONCURRENCE: / / / /	
CONCURRENCE: JOHN R. NEBRIG / 06 / 23 / 97 /		CONCURRENCE: J.H. VICK / 06 / 24 / 97 /	
MAINTENANCE CONCURRENCE: M.L. McINTOSH / 06 / 19 / 97 /		ENVIRONMENTAL HEALTH CONCURRENCE: DENNIS S. DAVIS / 06 / 19 / 97 /	
SAFETY OFFICE CONCURRENCE: M.E. MANN / 06 / 18 / 97 /		COMMUNICATIONS OFFICE / 06 / 18 / 97 /	
TELECOMMUNICATIONS EQUIPMENT AFFECTED BY THIS CONTRACT WORK IS NOT TO BE ALTERED OR REMOVED BY THE CONTRACTOR. CONTACT THE CDR IN THE EVENT OF A CONFLICT.		AE FIRM: AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA	
SUBMITTED: HOWARD C. BOZEMAN		APPROVAL, RECOMMENDED: ARTHUR HARGROVE JR	
DESIGNED: D. GRIMWOOD		DRAWN: D. GRIMWOOD	
CHECKED: R. TALJANKO		DESIGN DATE: 06-24-97	
SPEC. NO. BMMS-3		DWG NO. FAC-FQ-4707-C3	
SCALE: AS NOTED		SHEET 4 OF 33	



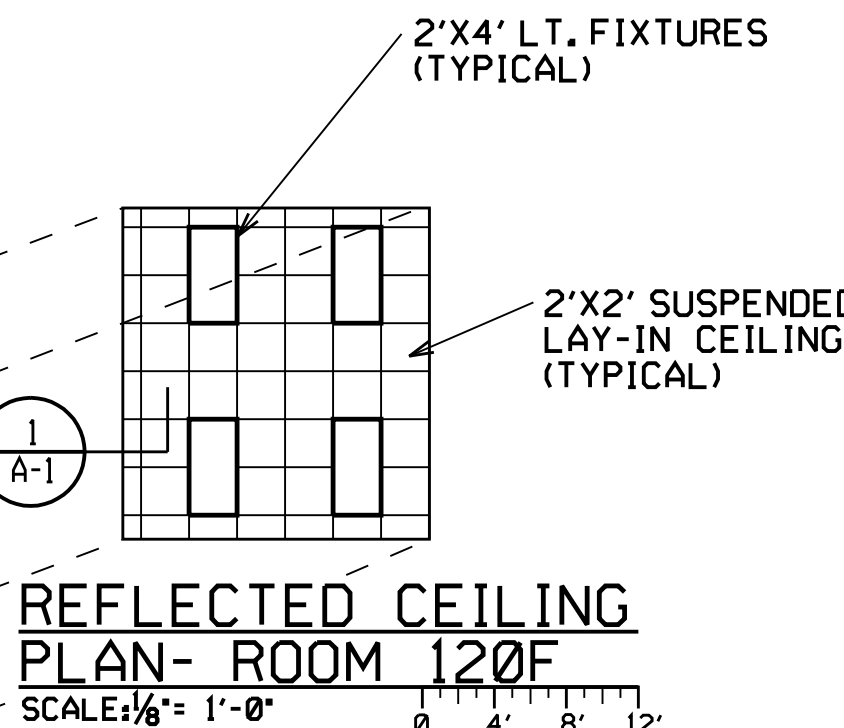
ARCHITECTURAL SCOPE OF WORK

THE WORK CONSISTS OF CONSTRUCTING A STEEL FRAME BUILDING ON A CONCRETE SLAB AND FOUNDATION WITH METAL SIDING AND STANDING SEAM METAL ROOF. TO HOUSE AN AUTOCLAVE AND ACCESSORY EQUIPMENT. THE DESIGN INCLUDES THREE ADDITIVE ALTERNATES:

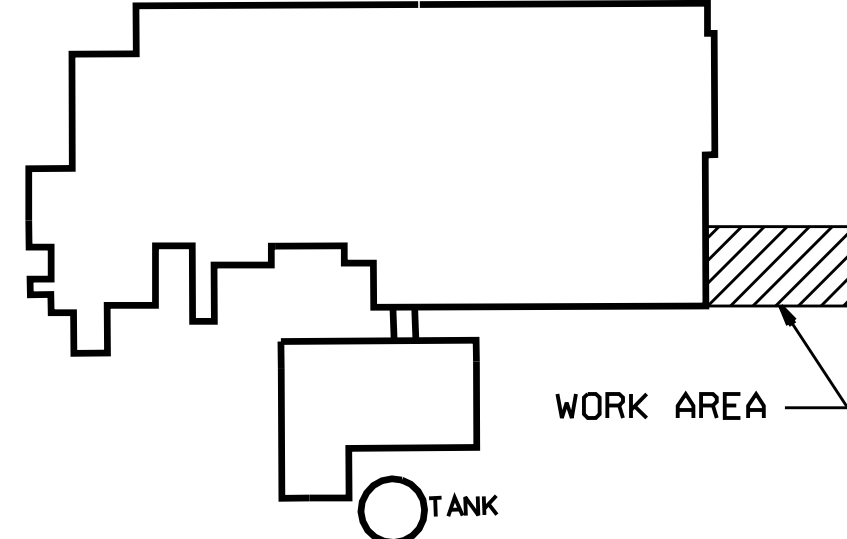
1. INSTALL 10'-0" X 12'-0" ROLL-UP DOOR
2. INSTALL 15 TON CAPACITY MONORAIL HOIST. SEE SHEET S-1.
3. INSTALL CANOPY STRUCTURE INCLUDING ROOF, STEEL BENTS, PURLINS, TRIM, PAINT, ETC. ON STRUCTURE TO SHELTER THE EXPOSED PORTION OF THE AUTOCLAVE.

ARCHITECTURAL NOTES

1. VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE PRIOR TO CONSTRUCTION.
2. REPAIR OR REPLACE ALL WORK DAMAGED IN CONSTRUCTION TO PRODUCE A COMPLETELY FINISHED JOB.
3. PRETREAT NEW BUILDING FOUNDATIONS AND SLABS WITH APPROVED TERMITICIDE.
4. SUBMIT COLOR SAMPLES FOR SELECTION AND APPROVAL OF ALL EXTERIOR AND INTERIOR FINISH MATERIALS.
5. ROLL-UP DOOR - EQUAL TO "OVERHEAD DOOR" STORMITE INSULATED SERVICE DOOR, SERIES 625 UFN, COLOR: DOVE GREY, WITH THE FOLLOWING FEATURES.
 - A. CURTAIN SLATS - * F-265, 20 GA., GALVANIZED.
 - BACK COVER-24 GA., GALVANIZED.
 - INSULATION-FOAMED-IN-PLACE URETHANE FOR AN R VALUE OF 5.8 OR BETTER.
 - B. OPERATION- DOOR SHALL BE ELECTRIC HOIST OPERATION.
 - C. LOCKING- DOOR SHALL LOCK THROUGH OPERATOR GEARING.
 - D. WEATHERSTRIPPING- DOOR SHALL HAVE BOTTOM WEATHERSTRIP, EXTERIOR SURFACE GUIDE WEATHERSTRIP, AND INTERNAL HOOD BAFFLE WEATHERSTRIP AND WEATHERPROOF CONSTRUCTION BETWEEN HOOD AND WALL.
 - E. OPERATOR CONTROL PUSH-BUTTON STATIONS, 24VAC CLASS 2, THREE-BUTTON OPEN/CLOSE/STOP CURCULT. INDOOR STATIONS SHALL BE OPEN/CLOSE/STOP IN NEMA 1 ENCLOSURE, EXTERIOR STATIONS SHALL BE OPEN/CLOSE/STOP WITH ON-OFF KEY SWITCH IN NEMA 4 ENCLOSURE.
6. IF ALTERNATE NO. 1 IS NOT SELECTED, CONTRACTOR SHALL PROVIDE FRAMING FOR FUTURE INSTALLATION OF DOOR SPECIFIED. GIRTS SHALL BE PROVIDED THROUGH DOOR OPENING AND SIDING AND INSULATION SHALL BE INSTALLED TO MATCH ADJACENT WALL. DO NOT INSTALL ANY ITEM IN SUCH A WAY TO INTERFERE WITH THE INSTALLATION OF THE FUTURE ROLL-UP DOOR.
7. REMOVE EXISTING ROLL-UP DOOR INCLUDING ALL ASSOCIATED HARDWARE MOTORS, SWITCHES, TRACKS, ETC.
8. CAUTION! EXISTING CORRUGATED SIDING CONTAINS ASBESTOS. WHERE DRILLING, SAWING OR CUTTING OF ASBESTOS CONTAINING MATERIALS OCCUR, PROPER PROCEDURES MUST BE USED.
9. DOOR LOUVERS: FACTORY INSTALLED - EQUAL TO "LESLIE" LOCK, MODEL 80Y WITH 43 PERCENT FREE AREA. SIZE 24" X 24". INSTALL WITH INSECT SCREEN.

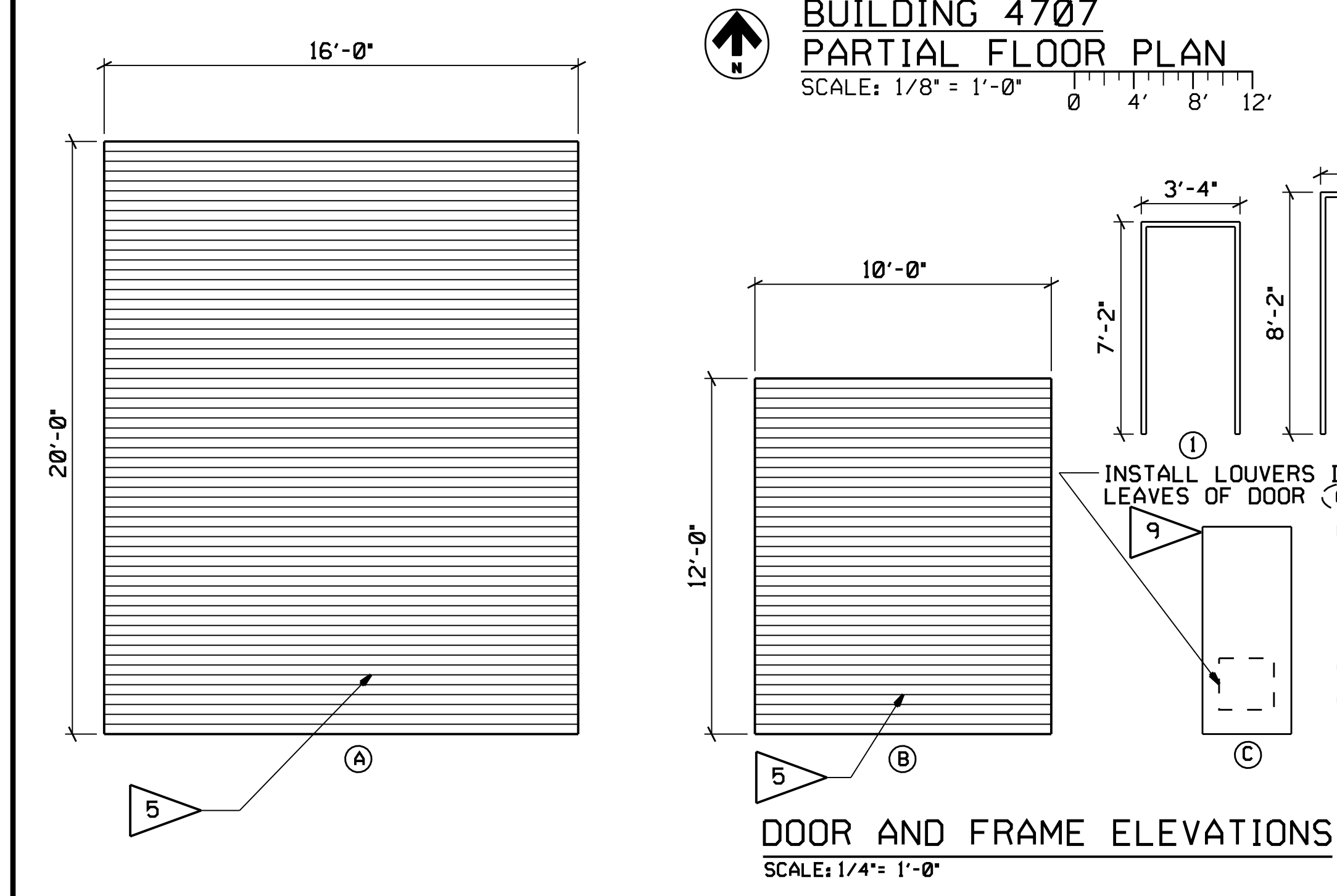


- LEGEND**
- F.E. FIRE EXTINGUISHER
 - EXISTING WALLS
 - NEW WALLS
 - NEW DOORS
 - NEW WINDOWS
 - BOLLARDS TO BE REMOVED
 - EXISTING BOLLARDS TO REMAIN
 - NEW BOLLARDS
 - COLUMN CENTERLINE



BUILDING 4707
KEY PLAN
N.T.S.

REFERENCE DESIGN CHANGES
REVIEWED FOR INCORPORATION
RFI-055, 068, 084



- HARDWARE**
- SET NO.1**
- 1 EA. LOCKSET "SARGENT" 8137 X LNL X 626
 - 1-1/2 PR. BUTTS "McKINNEY" T2714 X 626
 - 3 EA. SILENCERS "TRIMCO" 1229A
 - 1 EA. THRESHOLD "ZERO" #566
 - 1 EA. CLOSER EB-1234-0
 - 1 EA. DOOR BUMPER FOR #5
- SET NO.2**
- 1 EA. LATCHSET "SARGENT" 8115 X LNL X 626
 - 1-1/2 PR. BUTTS "McKINNEY" T2714 X 626
 - 3 EA. SILENCERS "TRIMCO" 1229A
 - 1 EA. THRESHOLD "ZERO" #566
 - 1 EA. CLOSER EB-1234-0
- SET NO.3**
- 1 EA. LOCKSET "SARGENT" 8137 X LNL X 626
 - 4 PR. BUTTS "McKINNEY" T2714 X 4-1/2 X 4-1/2
 - 1 EA. SURFACE MOUNTED DEAD BOLT SET (FOOT AND FOOT) "TRIMCO" 3917 X 626 (INACTIVE LEAF)
 - 1 EA. SILENCERS "TRIMCO" 1229A
 - 1 EA. THRESHOLD FOR DOOR #6
 - 1 EA. DOOR BUMPER FOR #6

DOOR SCHEDULE										
DOOR MARK	OPENING SIZE	THICKNESS	TYPE	CONSTRUCTION	FACING/FINISH	GLASS	RATING (HRS)	FRAME	HARDWARE	HEAD JAMB
1	18'-0" X 20'-0"	-	-	REMOVE EXISTING ROLL-UP DOOR	7	-	-	-	-	-
2	16'-0" X 20'-0"	-	A	-	IM	-	NR	-	-	-
3	3'-0" X 7'-0"	1 3/4"	D	IM	MP	LS	NR	1	6/A3	7/A3
4	10'-0" X 12'-0"	-	B	-	IM	-	NR	-	2/A3	2/A3
5	3'-0" X 7'-0"	1 3/4"	C	IM	MP	-	NR	1	6/A3	7/A3
6	8'-0" X 8'-0"	1 3/4"	C	IM	MP	LS	NR	2	6/A3	7/A3
7	3'-0" X 7'-0"	1 3/4"	D	IM	MP	LS	NR	1	2	4/A3
8	3'-0" X 7'-0"	1 3/4"	D	IM	MP	LS	NR	1	1	6/A3

• STANDARD HARDWARE BY MANUFACTURER UNLESS OTHERWISE SPECIFIED.

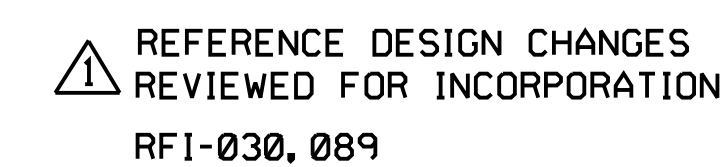
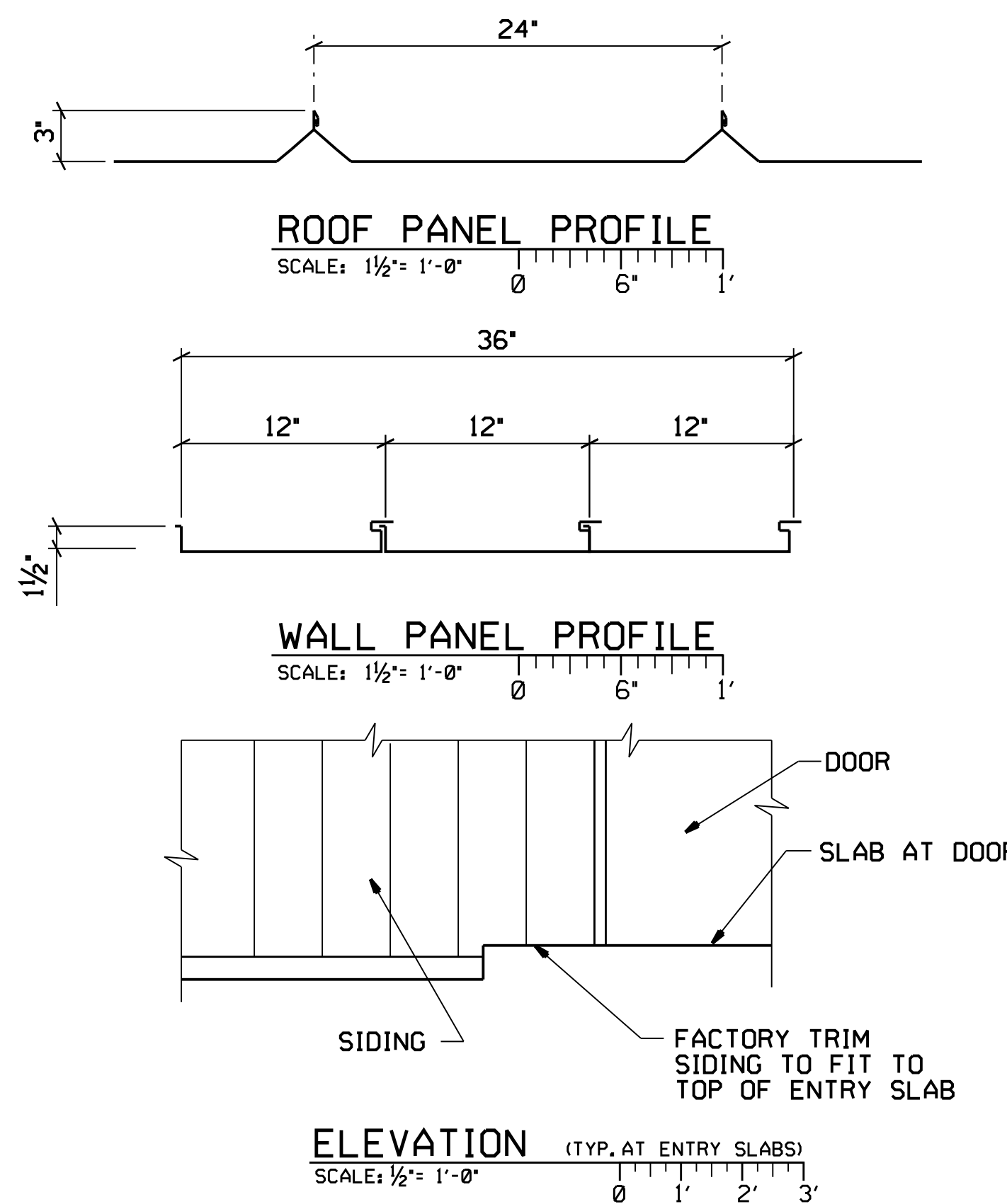
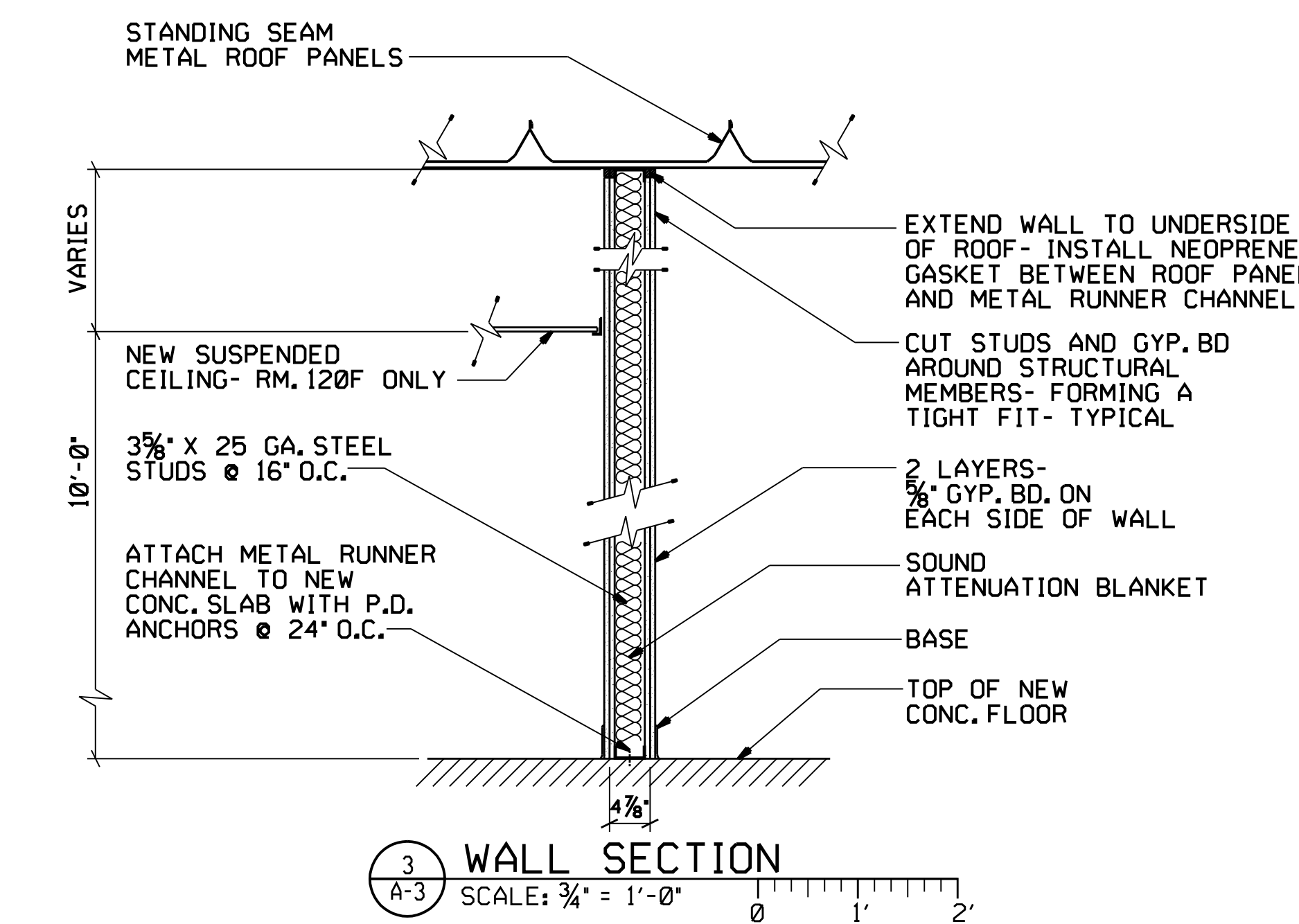
REDUCED SIZE DRAWING
DO NOT SCALE

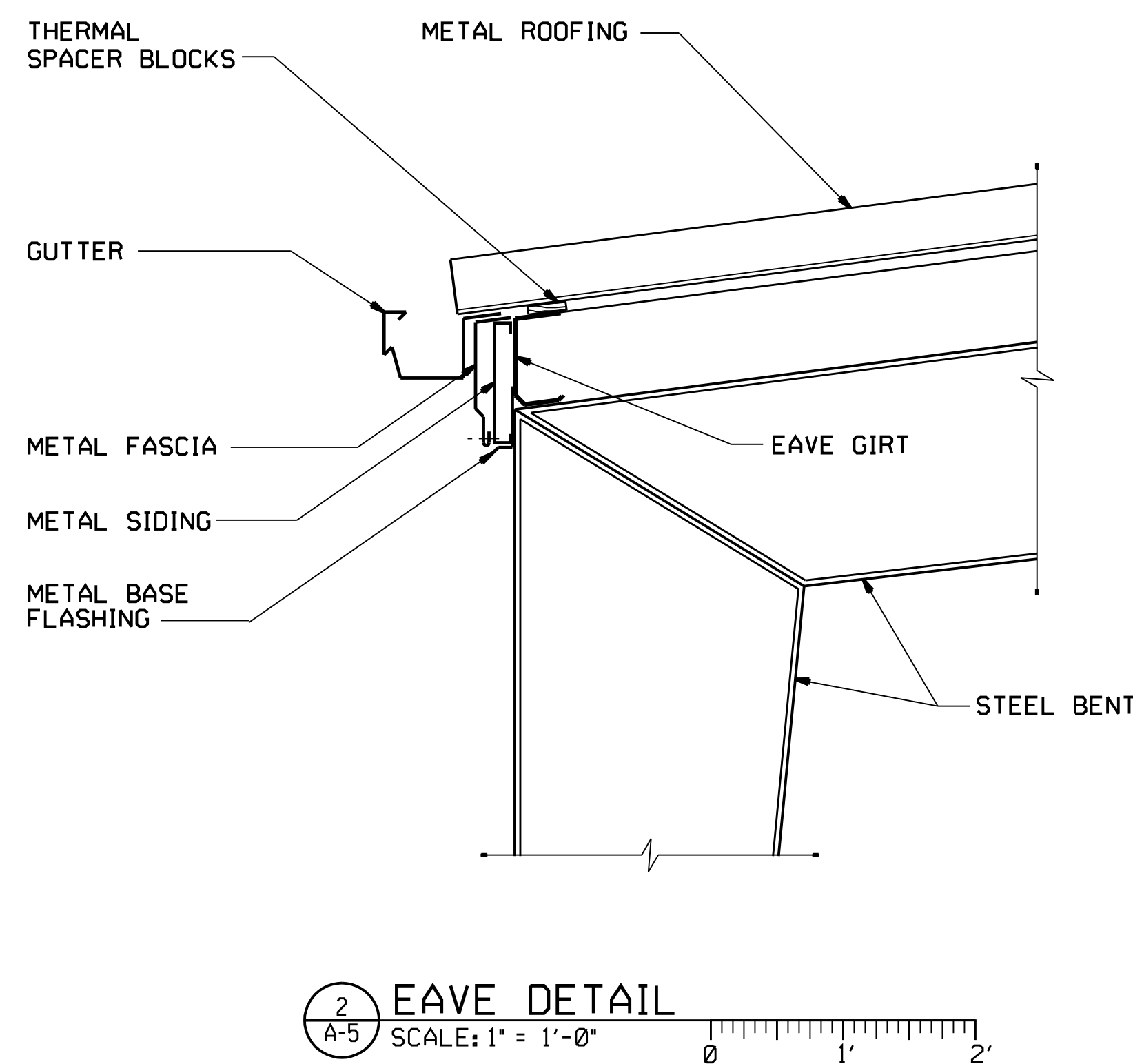
CADD DRAWING

CHANGES TO THIS DRAWING SHALL BE MADE
12885 ON CADD ONLY.
10-09-96 LATEST CADD UPDATE: 03-00-09
SBC BY: G. BATCHELOR 04:00 PM

CONCURRENCE:	/ / / /	REV. BY DATE	3/8/99	AS-BUILT PER REDLINES	98088	RDP	LWG
CONCURRENCE:	/ / / /	REVISION		CL. NO.		APPROVED	
CONCURRENCE:	JOHN R. NEBRIG	/06 /23 /97 /					
MAINTENANCE	J.H. VICK	/06 /24 /97 /					
USING OFFICE	M.L. MCINTOSH	/06 /19 /97 /					
ENVIRONMENTAL HEALTH	DENNIS S. DAVIS	/06 /19 /97 /					
SAFETY OFFICE	M.E. MANN	/06 /18 /97 /					
TELECOMMUNICATIONS EQUIPMENT AFFECTED BY THIS CONTRACT WORK IS NOT TO BE ALTERED OR REMOVED BY THE CONTRACTOR, CONTACT THE CTR IN THE EVENT OF A CONFLICT.							
REF. NO.	A-1	OF 5					

AE FIRM:	AE FIRM:	NASA AE CONTRACT NO.	
AJT & ASSOCIATES, INC.	HUNTSVILLE - ALABAMA	NASA 8-40083	
SUBMITTED:	APPROVAL/RECOMMENDATION:	ACCEPTED FOR CONSTRUCTION:	
HOWARD C. BOZEMAN	R.B. FELDER	J. CLARK BOAZ	
AB21 DATE:	06-24-97	AB41 DATE:	06-25-97
DESIGNED:	APPROVAL/RECOMMENDATION:	DWG NO.	
R. Q. BARTON	ARTHUR HARGROVE JR	FAC-FQ-4707-A1	
DRAWN:	DATE:		
S. GARRETT	06-24-97		
CHECKED:	DATE:		
A. HARGROVE	06-24-97		
SCALE:	AS NOTED	SPEC. NO.	BMMS-3

[illegible]



22

1'-1" 1 1/2" 1'-0 1/2"

EXISTING CORR. ASBESTOS SIDING

EXISTING STEEL GIRT

STEEL COLUMN

GIRT CLIP

STEEL GIRT

EXISTING CEMENT ASBESTOS BOARD CORNER

FLASHING TO HOOK BEHIND CORNER PIECE

SIDING PANEL

20 GA. METAL TRIM

SEALANT TAPE AND SEALANT AS REQUIRED

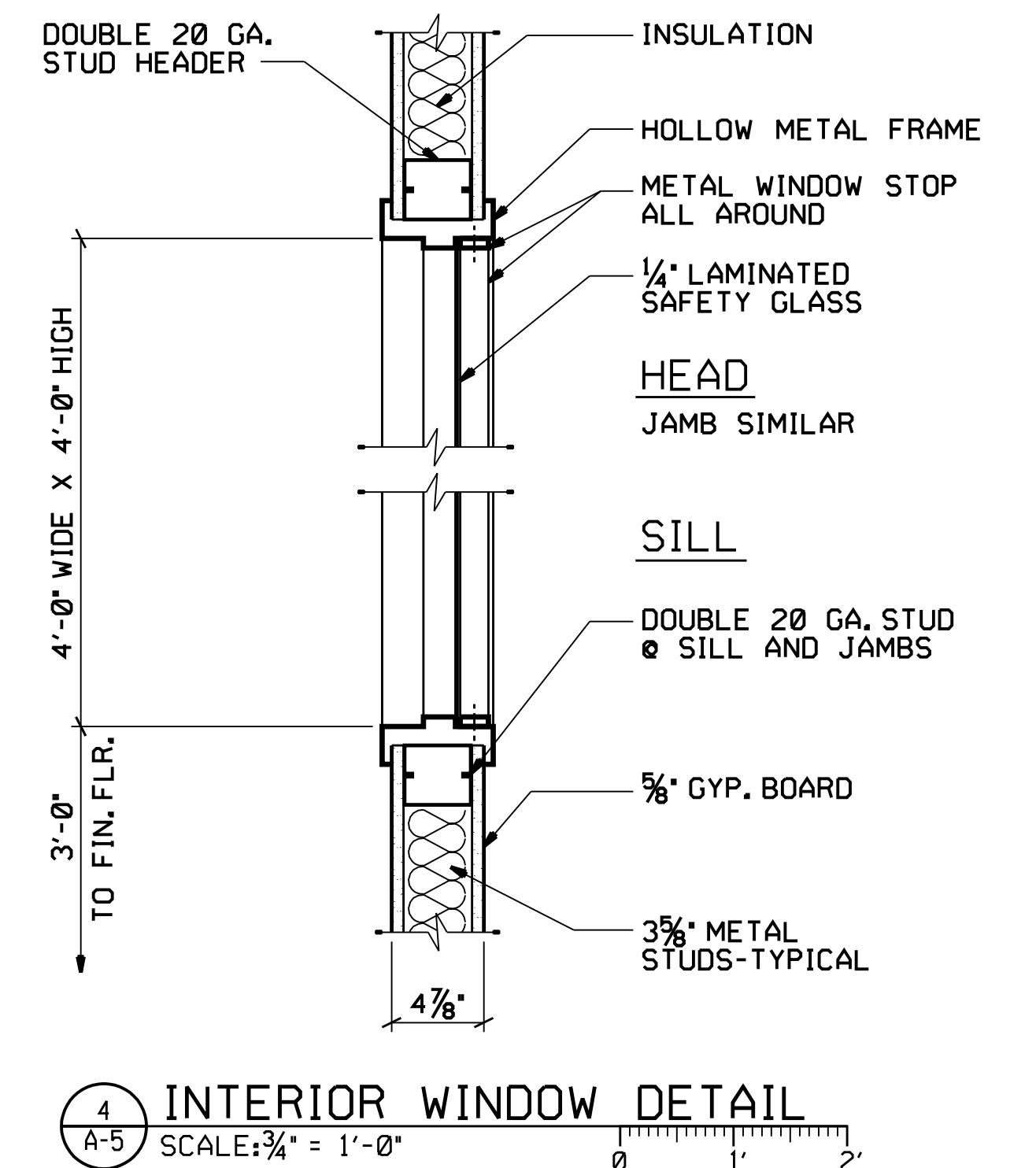
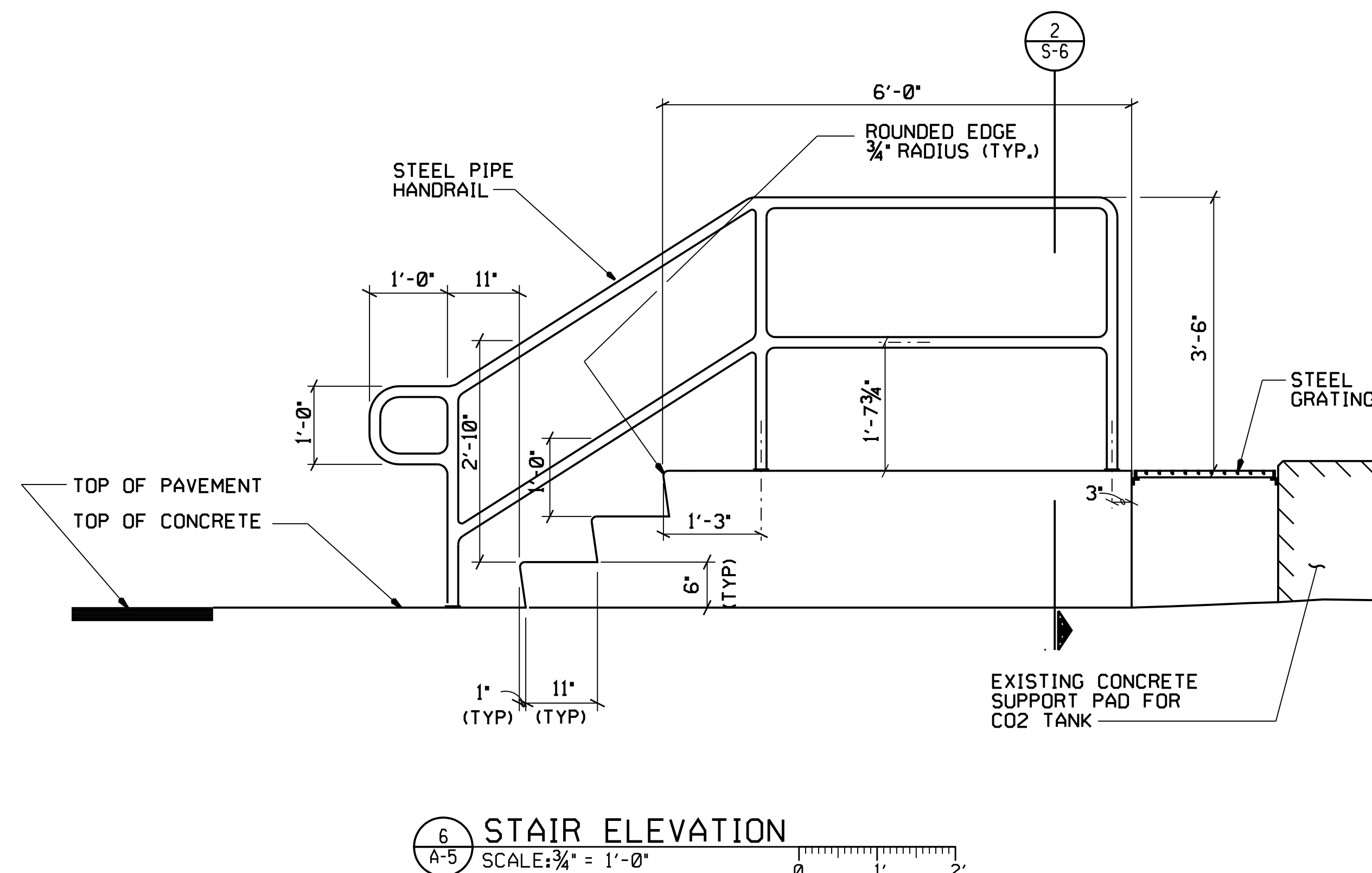
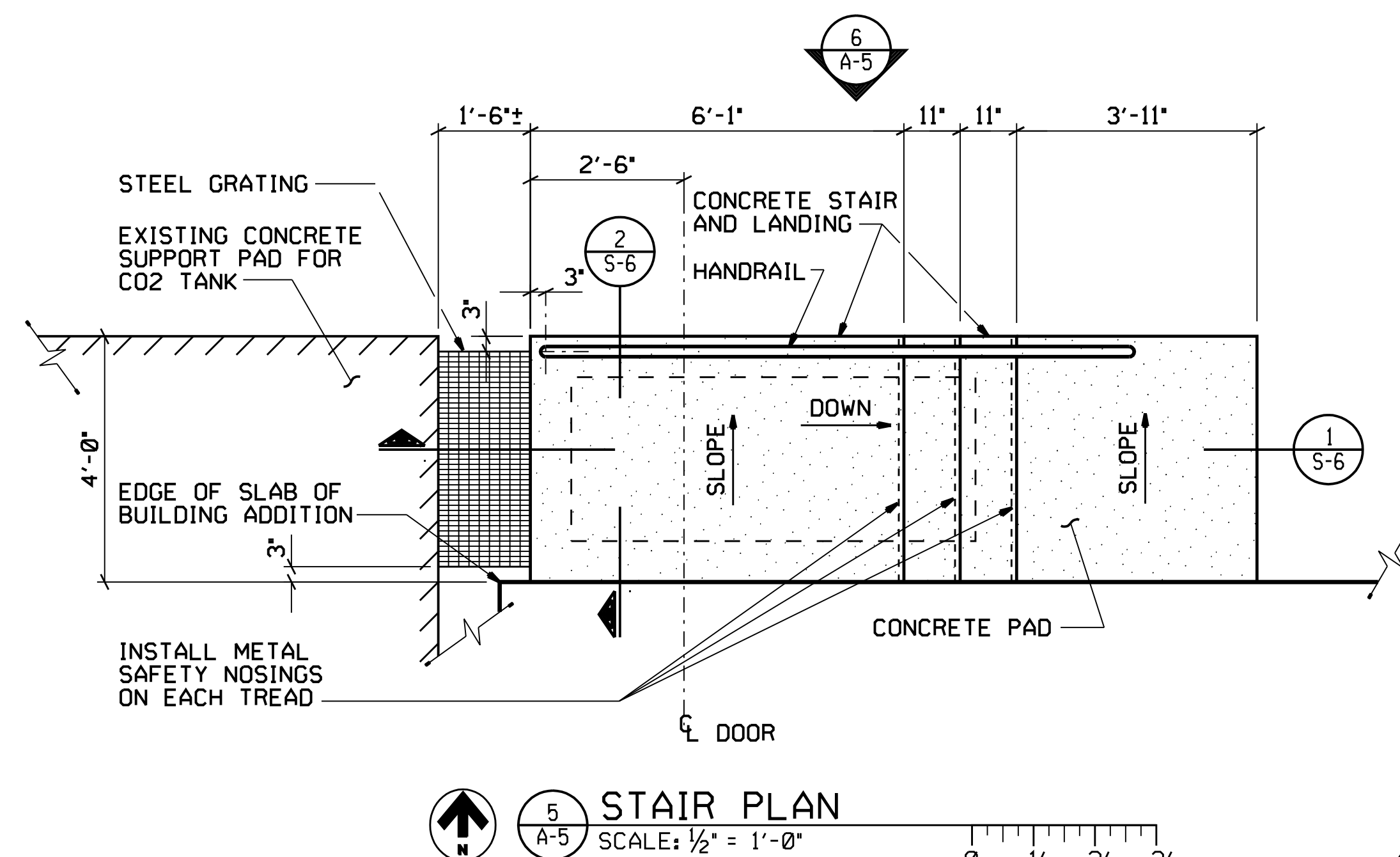
22.05



ROOM FINISH SCHEDULE										
ROOM NAME	ROOM NO.	FLOOR	BASE	WALLS				CEILING	CLG. HT.	NOTES
				NORTH	SOUTH	EAST	WEST			
AUTOCLAVE	12Ø	CONC.-PT.	RUBBER	EXP. INSUL. /STEEL	EXP. INSUL. STEEL & GYP. BD.-PT.	EXP. INSUL. /STEEL	BRICK/CAP -PAINT	NONE	-	1, 2
EQUIPMENT AREA	12ØD	CONC.-PT.	RUBBER	GYP. BD.-PAINT	GYP. BD.-PAINT	EXP. INSUL. /STEEL	GYP. BD.-PAINT	NONE	-	1, 2
ELECTRIC EQUIPMENT ROOM	12ØE	CONC.-PT.	RUBBER	GYP. BD.-PAINT	EXP. INSUL. /STEEL	EXP. INSUL. /STEEL	EXP. INSUL. /STEEL	NONE	-	1, 2
CONTROL ROOM	12ØF	CONC.-PT.	RUBBER	GYP. BD.-PAINT	GYP. BD.-PAINT	GYP. BD.-PAINT	EXP. INSUL. /STEEL	ACOUS.	9'-0"	1, 2

ACOUS.- SUSPENDED ACOUSTICAL CEILING SYSTEM
CONC.- CONCRETE
EXP. INSUL./ STEEL- EXPOSED INSULATION AND STEEL STRUCTURE
GYP.BD.- GYPSUM BOARD
PT. - PAINT
CAP - EXISTING CEMENT ASBESTOS PANEL

1. PAINT CONCRETE FLOOR
2. BASE ON CMU AND GYP. BD. WALLS ONLY



<h1 style="margin: 0;">REDUCED SIZE DRAWING</h1> <hr/> <h1 style="margin: 0;">DO NOT SCALE</h1>	<h1 style="margin: 0;">CADD DRAWING</h1> <hr/> <p>CHANGES TO THIS DRAWING SHALL BE MADE 12865 ON CADD ONLY. 01-14-97 LATEST CADD UPDATE: 03-09-09 SBC BY: G. BATCHELOR 0400 PM</p>
---	--

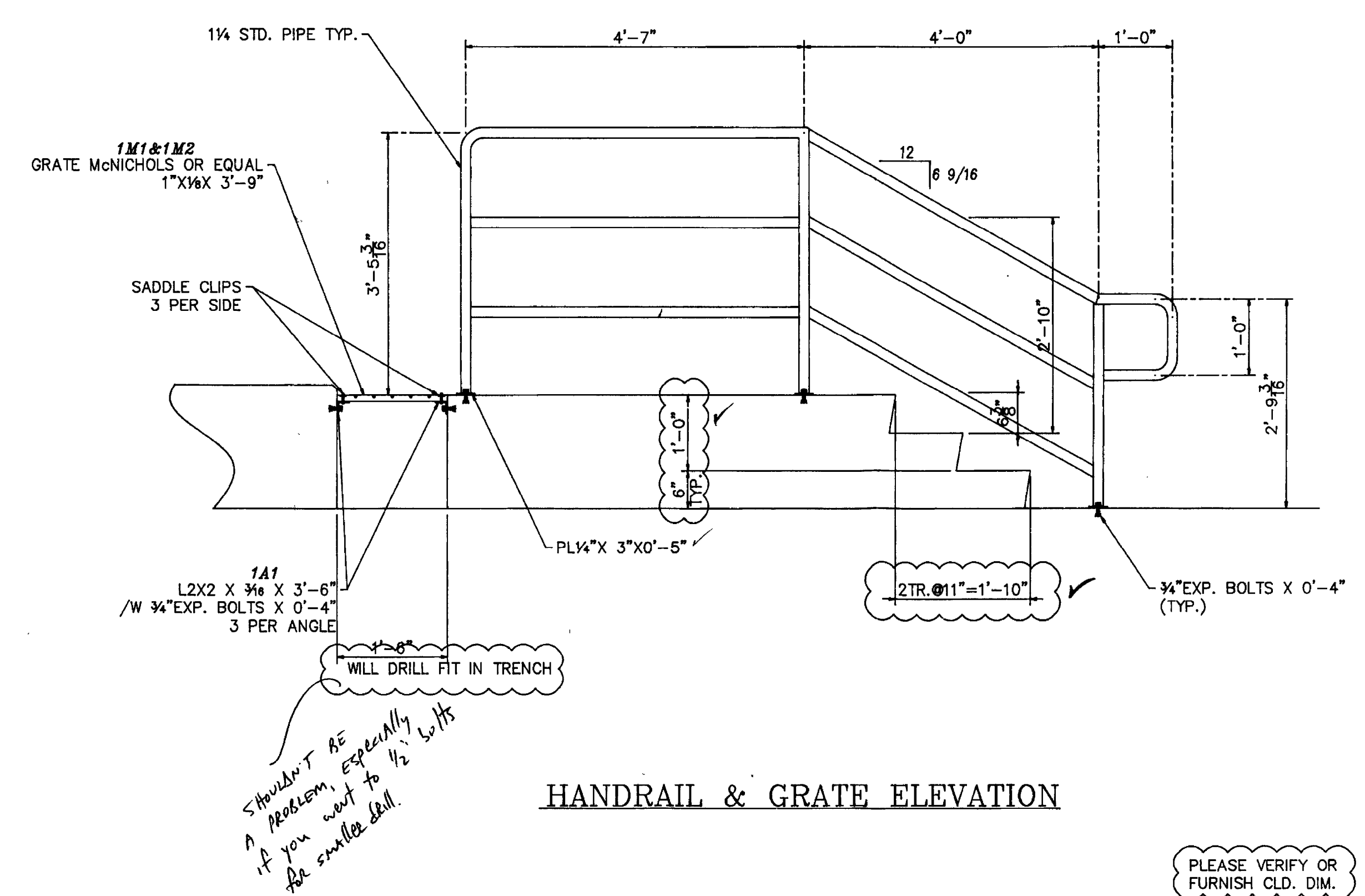
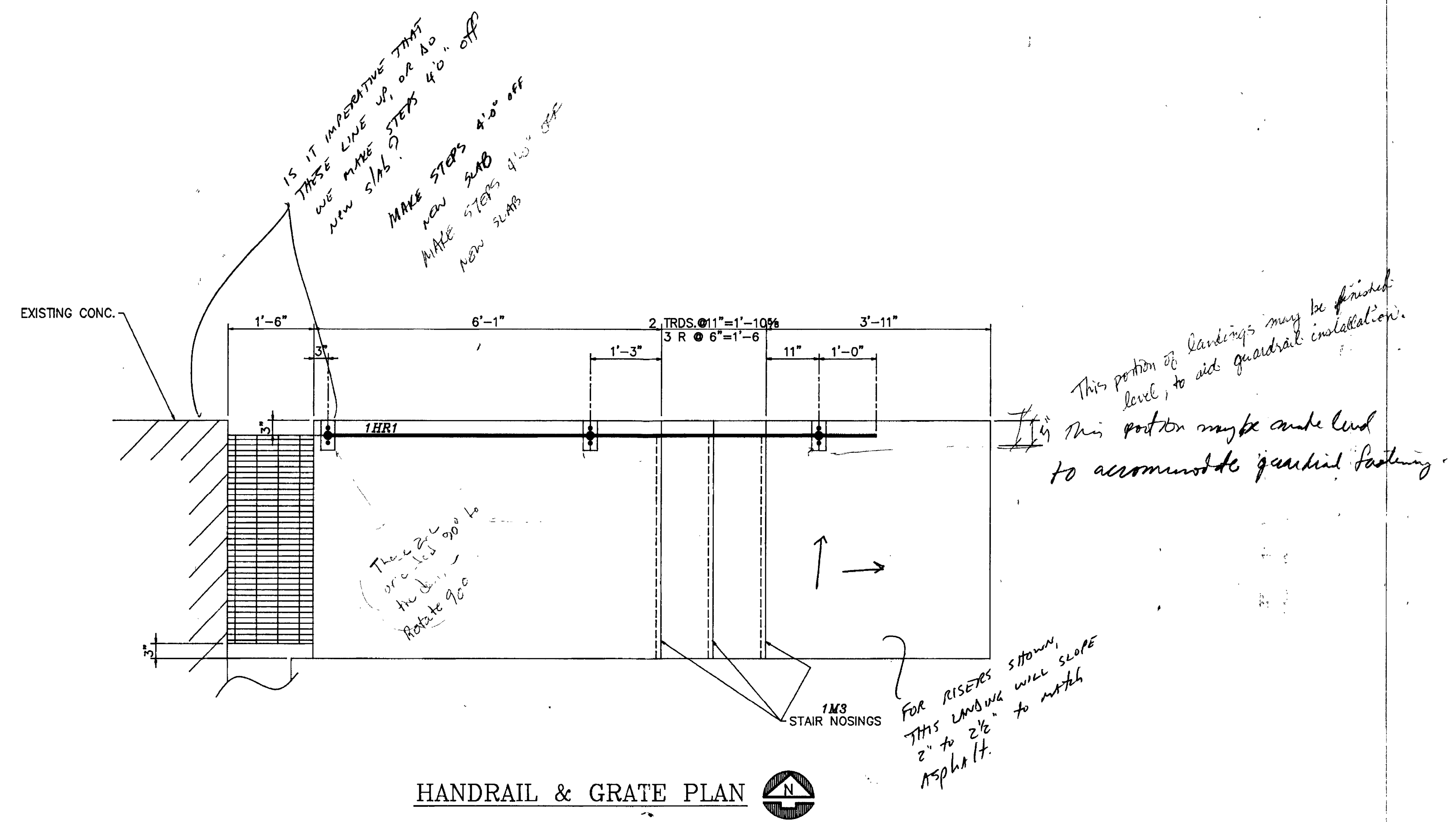
CONCURRENCE:									
CONCURRENCE:	/	/	/						
CONCURRENCE:	/	/	/						
CONCURRENCE:	/	/	/						
CONCURRENCE:	02/22/99			AS-BUILT PER REDLINES			98088	RDP	LWG
CONCURRENCE:	JOHN R. NEBRIG	REV.	BY	DATE	REVISION		C.L.I.NO.	APPROVED	
MAINTENANCE	/ 06 / 23 / 97 /								
CONCURRENCE:	J.H. VICK								
USING OFFICE	/ 06 / 24 / 97 /								
CONCURRENCE:	M.L.C. MCINTOSH								
ENVIRONMENTAL HEALTH	/ 06 / 19 / 97 /								
CONCURRENCE:	DENNIS S. DAVIS								
SAFETY OFFICE	/ 06 / 19 / 97 /								
CONCURRENCE:	M.E. MANN								
COMMUNICATIONS OFFICE	/ 06 / 18 / 97 /								
<p>TELECOMMUNICATIONS EQUIPMENT AFFECTED BY THIS CONTRACT WORK IS NOT TO BE ALTERED OR REMOVED BY THE CONTRACTOR. CONTACT THE CDR IN THE EVENT OF A CONFLICT.</p>									
REF. NO.									

<p>Marshall Space Flight Center Huntsville, Alabama 35812</p> <p>WORK REQUEST NO. 1286-0000-288-5.R</p> <h2 style="margin: 0;">BUILDING 4707</h2> <h2 style="margin: 0;">INSTALL AUTOCLAVE</h2> <p>MISCELLANEOUS DETAILS</p>	<p>AS FIRM:</p> <p>AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA</p> <p>APPROVAL:</p> <p>HOWARD C. BOZEMAN R.B. FELDER</p> <p>AS FIRM:</p> <p>NASA AS CONTRACT NO. NASA 8-40083</p> <p>APPROVED FOR CONSTRUCTION: J. CLARK BOAZ</p> <p>AWN</p> <p>DWG NO.</p> <p>FAC-F-0707-A5</p>
<p>SUBMITTED:</p> <p>DATE: 01-17-97</p> <p>DESIGNED: R. D. BARTON</p> <p>CHECKED: S. GARRETT</p> <p>SCALE: AS NOTED</p>	<p>APPROVAL:</p> <p>DATE: 06-24-97</p> <p>APPROVAL:</p> <p>DATE: 06-24-97</p> <p>SPEC. NO.</p> <p>REVISIONS:</p>

A-5

OF 7

SHFT 9. OF 3



APPROVED
EXCEPT AS
NOTED

☐ RESUBMITTAL REQUIRED
☒ RESUBMITTAL NOT REQUIRED

Approval does not constitute a warranty, nor does it constitute an endorsement of the product or the contractor. The contractor is responsible for all errors, omissions, or deviations from the specifications, dimensions, adequacy, or quality and compliance with specifications.

REVIEWED 3/10/98
CHECKED

FOR APPROVAL
NOT FOR FIELD USE

SERVICE STEEL INC.
4208 SCHRIMSHER LANE, SW
HUNTSVILLE, ALA. 35805
PH. (205) 883-1190
STRUCTURAL STEEL • MISC. IRON • STEEL JOIST • DECKING

Autoclave BLDG. 4707
Marshall Space Flight Center

CONTRACTOR: Lee Builders
ARCHITECT: AJT & Associates
ENGINEER: AJT & Associates

DATE 2/20/98 NO. 5/1 DEST. APP.

BY MDG CHKD APPD DATE 2/18

REVISED
BY CHKD APPD DATE

JOB NUMBER 4309

SHEET NO. E1

REV. NO.

FILE - c:\files\4309\430901.dwg

CADD DWG.

CHANGES TO THIS DRAWING SHALL BE MADE ON CADD ONLY.

12865R 03-09-09 LATEST CADD UPDATE: 03-10-09

GAB BY: G. BATCHELOR 12:30 PM

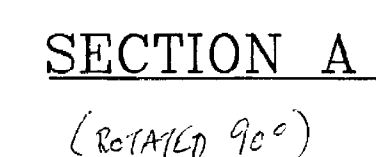
THIS SHEET ADDED PER VENDOR SUBMITTAL

Marshall Space Flight Center
Huntsville, Alabama 35812

BUILDING 4707
INSTALL AUTOCLAVE
HANDRAIL AND GRATE PLAN AND ELEVATION - VENDOR DRAWING

DRAWING NO.
FAC-F0-4707-A5.1
SHEET 10 OF 33

REF. NO. A5.1



CONTRACTOR: <u>Lee Builders</u>					
ARCHITECT: <u>AJT & Associates</u>					
ENGINEER: <u>AJT & Associates</u>					
BY	CHKD	APPD	DATE	JOB NUMBER	SHEET NO ONE
MDG			2/18		
REVISED					
BY	CHKD	APPD	DATE	4309	REV. NO.
FILE # <u>8-186 / 4309 / 4309I.dwg</u>					

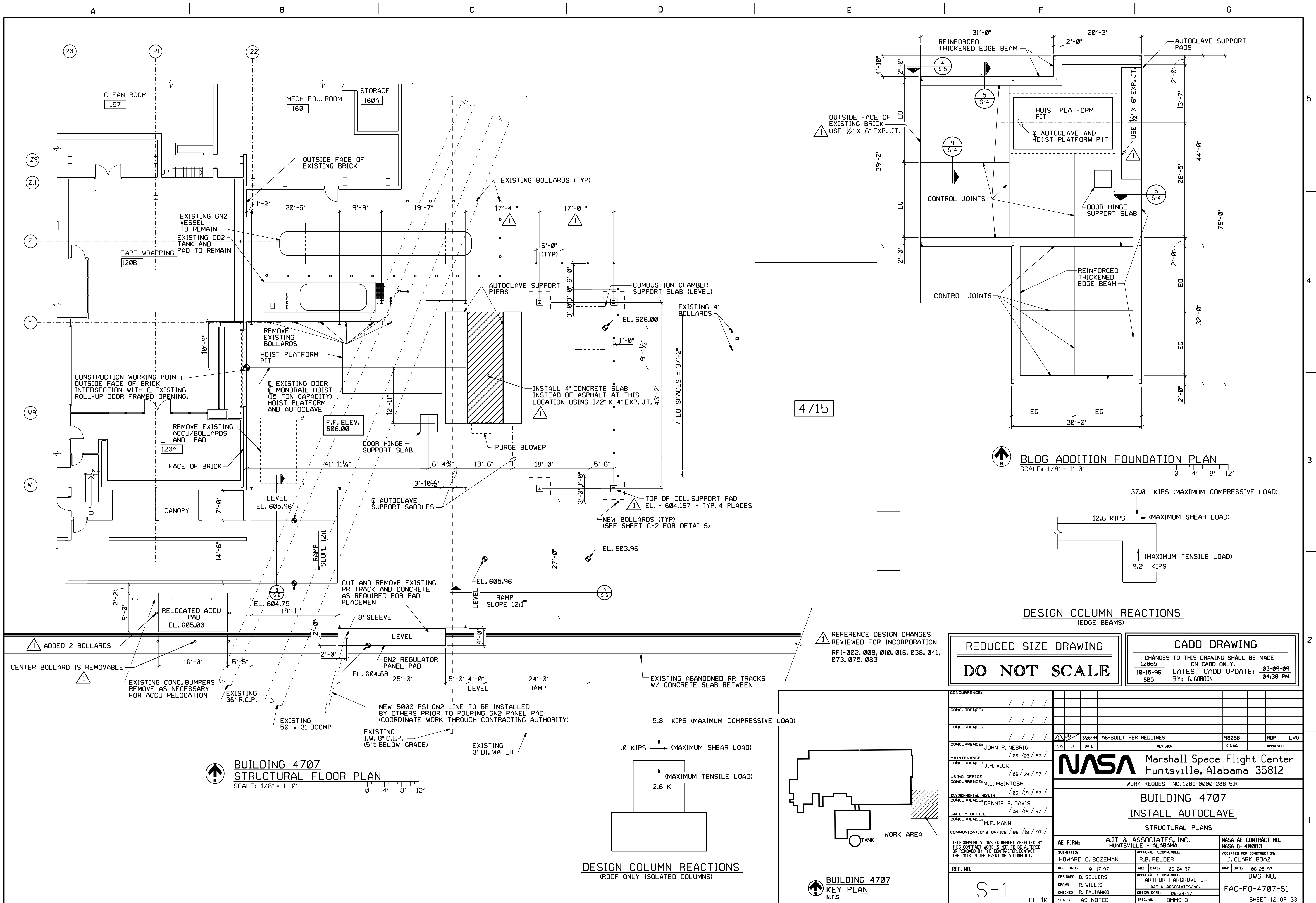
PRINTS		
DATE	NO.	DEST.
2/20/98	5/1	APP.

	GB	03-09-09	THIS SHEET ADDED PER VENDOR SUBMITTAL			
REV.	BY	DATE	REVISION	C.L. NO.	APPROV	

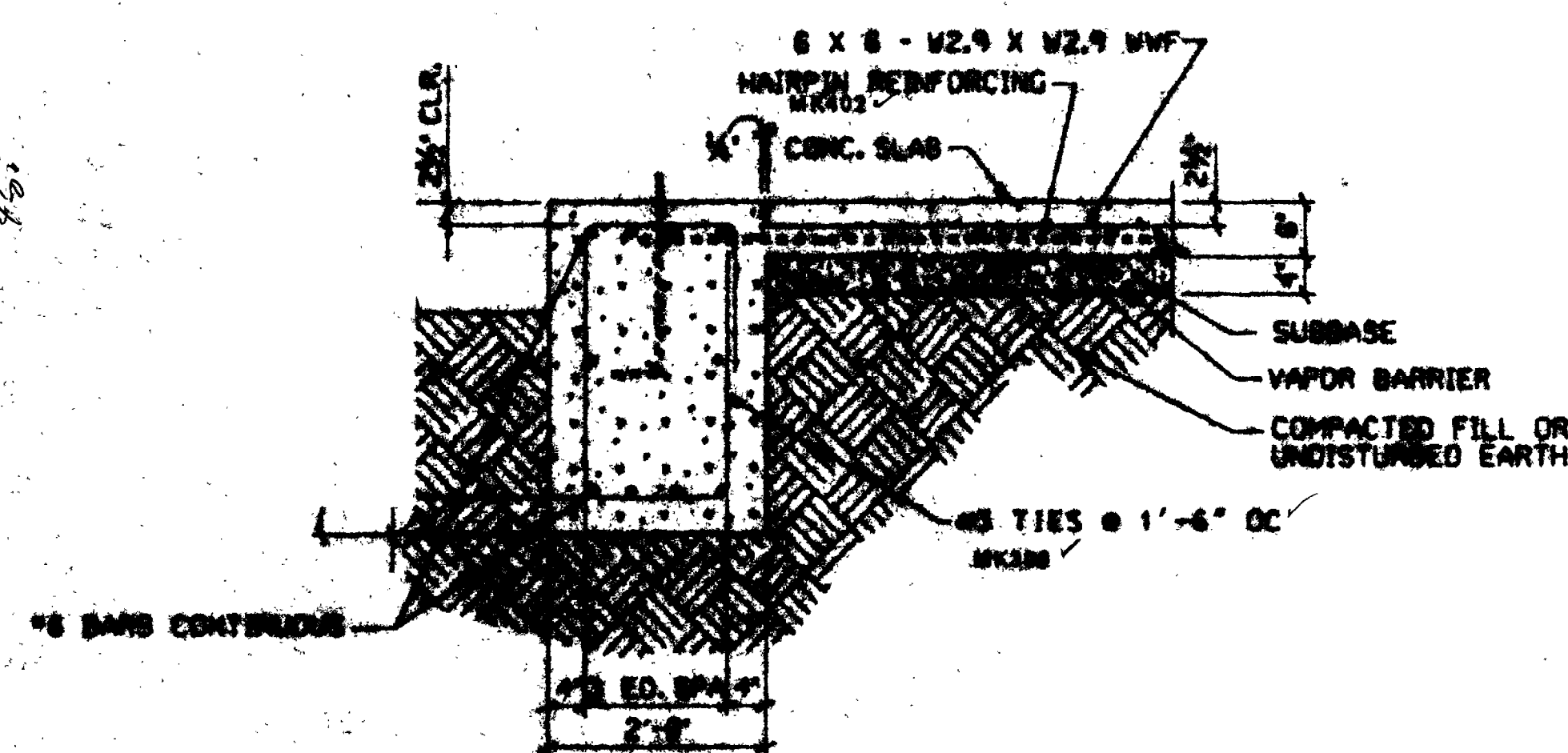
 Marshall Space Flight Center
Huntsville, Alabama 35812

BUILDING 4707
INSTALL AUTOCLAVE
HANDRAIL AND GRATE DETAILS - VENDOR DRAWING

DRAWING NO.
FAC-FQ-4707-A5.2
SHEET 11 OF 33

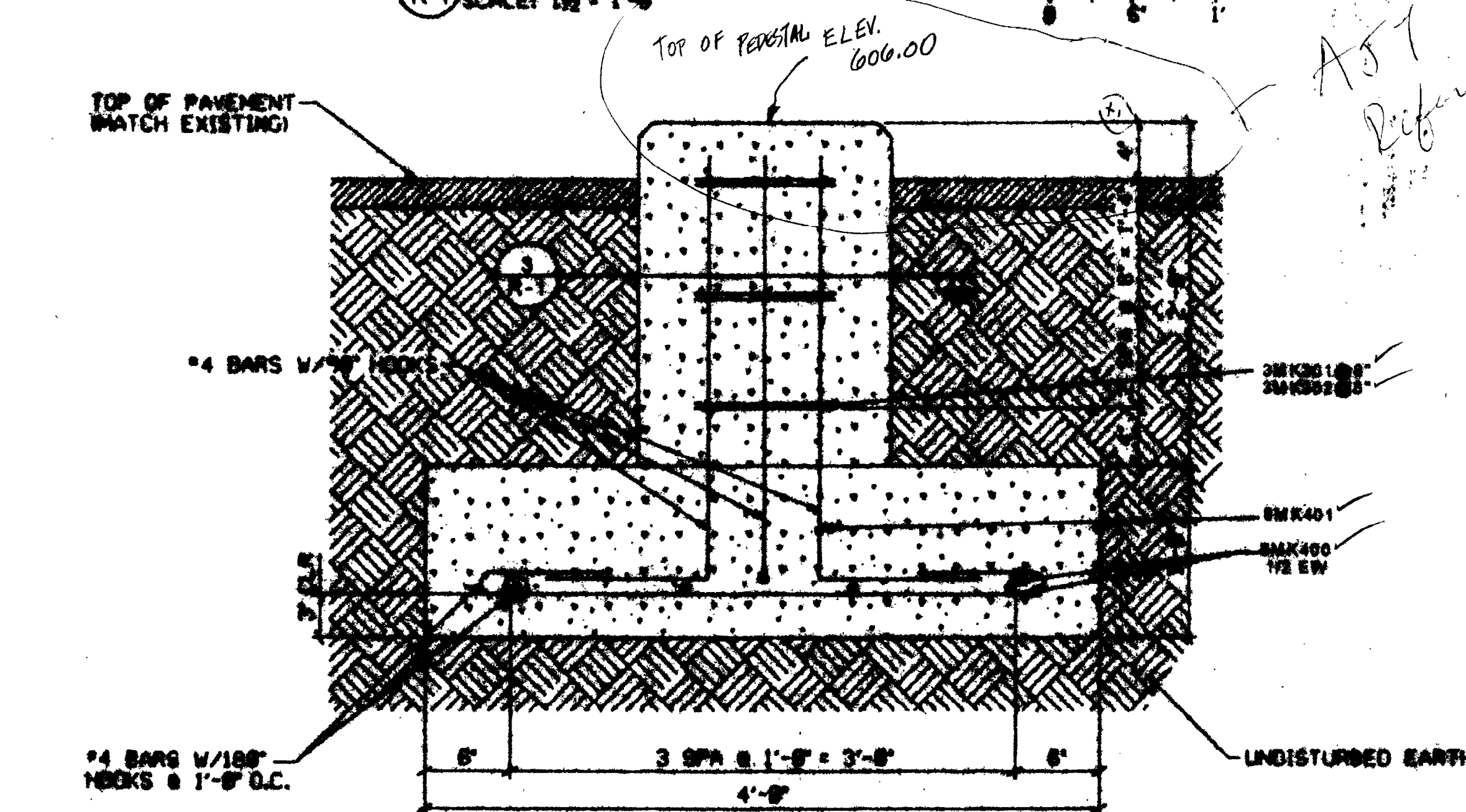


BLDG ADDITION FOUNDATION PLAN
SCALE: 1/8" = 1'-0"



REINFORCED EDGE BEAM

3 SHED SUPPORT PEDESTAL REINFORCING
R-1 SCALE: 1/2" = 1'-0"



2 SHED SUPPORT PEDESTAL/FOOTING REINFORCING
R-1 SCALE: 1 1/2" = 1'-0" (4REQ)

NASA
FACILITIES OFFICE NASA MSFC, AL 35812

**APPROVED
EXCEPT AS
NOTED**

Approval does not relieve the Contractor of the responsibility for errors, omissions, correctness of dimensions, adequacy, of details and compliance with specifications.

<i>DAS</i>	DATE 1/27/98
------------	-----------------

AJT FILE COPY

☒ No Exception ☐ Rejected
☐ Furnish as Corrected ☐ Revise/resubmit
☐ Submit as Specified ☐ Alternates included


Checking is for general conformance with the design concept and with contract documents. Action shown is subject to the requirements of the plans and specifications. The Subcontractor/Supplier is responsible for items supplied, dimensions, quantities, fabrication process, techniques of construction, satisfactory performance of his work and coordination with all other trades.

LEE BUILDERS, INC.

Date 1-20-90 Signed MS. O'H

CADD DWG.

CHANGES TO THIS DRAWING SHALL BE MADE
12865R ON CADD ONLY.
03-09-09 LATEST CADD UPDATE: 03-10-09
GAB BY: G. BATCHELOR 01:00 PM

	GB	01-09-09	THIS SHEET ADDED PER VENDOR SUBMITTAL						
REV.	BY	DATE	REVISION				C.L. NO.	APPROVED	

 Marshall Space Flight Center
Huntsville, Alabama 35812

BUILDING 4707
INSTALL AUTOCLAVE
BLDG ADDITION FOUNDATION PLAN AND DETAILS - VENDOR DRAWING

REF. NO. S1.1

DRAWING NO.
FAC-FQ-4707-S1.1
SHEET 13 OF 33

STRUCTURAL NOTES

1. STRUCTURAL WORK SUMMARY:
- * CONSTRUCTION OF FOUNDATIONS FOR GFE AUTOCLAVE AND HOIST PLATFORM
 - * PLACEMENT OF AUTOCLAVE EQUIPMENT ON PREPARED FOUNDATIONS
 - * PLACEMENT OF HOIST PLATFORM ON PREPARED FOUNDATIONS
 - * CONSTRUCTION OF BUILDING ADDITION FOUNDATIONS AND FLOOR SLAB
 - * ERECTION OF PRE-ENGINEERED METAL BUILDING ON PREPARED FOUNDATION
2. SIZE AND WEIGHT (APPROXIMATELY 450,000 POUNDS) OF AUTOCLAVE MAKES PLACEMENT OF AUTOCLAVE NECESSARY PRIOR TO CONSTRUCTION OF METAL BUILDING ADDITION. CONTACT CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR) TO SCHEDULE DELIVERY OF AUTOCLAVE AND HOIST PLATFORM COMPONENTS TO THE JOB SITE FOR PLACEMENT ACTIVITY AS SOON AS THE FOUNDATIONS ARE ADEQUATELY CURED AND BACKFILLED.
3. IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, PLACE AUTOCLAVE AND HOIST PLATFORM ON THEIR PREPARED FOUNDATIONS. CONTACT COTR FOR PLACEMENT INSTRUCTIONS. ALLOW CONCRETE TO CURE FOR A MINIMUM OF TEN DAYS PRIOR TO PLACING AUTOCLAVE AND HOIST PLATFORM. DO NOT PLACE AUTOCLAVE NOR HOIST PLATFORM UNTIL BACKFILLING OPERATIONS OF THEIR RESPECTIVE FOUNDATIONS ARE COMPLETE.
4. VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE PRIOR TO FABRICATION AND CONSTRUCTION. WHERE DISCREPANCIES EXIST, CONFIRM COURSE OF ACTION WITH THE COTR BEFORE PROCEEDING.
5. ALL PRODUCTS ARE SPECIFIED ON AN "APPROVED EQUAL" BASIS. WHEN SUBSTITUTION OF A SPECIFIED ITEM IS DESIRED, SUBMIT FOR APPROVAL CATALOG AND/OR OTHER DATA NECESSARY FOR PRODUCT EVALUATION.
6. TO AID IN INSTALLATION, CERTAIN DIMENSIONS ARE PROVIDED FOR PRODUCTS SPECIFIED. WHERE AN APPROVED EQUAL IS SUBSTITUTED, SUBMIT TO THE COTR FOR APPROVAL THE SIZE AND WEIGHT OF THE ACTUAL PRODUCT, AND REVISED DRAWING DETAILS NECESSARY FOR INSTALLATION.
7. TOP OF NEW FLOOR SLAB SHALL MATCH EXISTING TOP OF SLAB ELEVATION (606.00).
8. CARE SHALL BE TAKEN TO PREVENT DAMAGE OF EXISTING UTILITIES, BUILDING SLAB AND FOUNDATION, AND TANK FOUNDATIONS DURING CONSTRUCTION.
9. GRANULAR MATERIAL FOR SUBBASE SHALL BE SAND, SAND-GRAVEL, CRUSHED STONE, OR A COMBINATION OF THESE MATERIALS, MEETING THE FOLLOWING REQUIREMENTS:
- MAXIMUM AGGREGATE SIZE: 1-1/4 INCH
PASSING NO. 200 SIEVE: 15% MAXIMUM
PLASTICITY INDEX: 6 MAXIMUM
LIQUID LIMIT: 25 MAXIMUM
10. COMPACT SUBBASE TO A MINIMUM OF 98% MAXIMUM DENSITY AT OPTIMUM MOISTURE DETERMINED BY SOIL COMPACTION TESTS IN ACCORDANCE WITH ASTM D698.
11. CONCRETE CONSTRUCTION AND PLACING EXCEPT FOR SLAB-ON-GRADE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF ACI 301-89 AND ACI 318-95.
12. CONCRETE SLAB-ON-GRADE CONSTRUCTION AND PLACING SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF ACI 301-89 AND ACI 302.1R-89.
13. NO CONCRETE ADMIXTURES CONTAINING CHLORIDES ARE ALLOWED, UNLESS APPROVED BY THE COTR.
14. WATERSTOPS: EQUAL TO "GREENSTREAK PVC STYLE 702", AS MANUFACTURED BY GREENSTREAK, ST. LOUIS, MO (800) 325-9504.
15. WHERE REQUIRED FOR REINFORCING STEEL BARS, PROVIDE HOOK AND/OR SPLICE LENGTHS CONFORMING TO ACI 318-95. SEE "DEVELOPMENT AND SPLICE LENGTH" CHART ON THIS SHEET.
16. AT PERIMETER OF NEW CONSTRUCTION AREAS, SAW CUT EXISTING ASPHALT PRIOR TO NECESSARY EXCAVATION. UPON COMPLETION OF BUILDING AND PERIPHERAL EQUIPMENT FOUNDATION CONSTRUCTION, REPAIR/REPLACE ASPHALT PAVEMENT IN CONSTRUCTION AREA TO MATCH ORIGINAL. AT NEW ENTRY RAMP LOCATIONS, PROVIDE ASPHALT WEARING SURFACE FLUSH WITH TOP OF CONCRETE.
17. PRIOR TO POURING CONCRETE, ENSURE ALL EMBEDDED UTILITIES AND PENETRATIONS ARE PROPERLY LOCATED AND SECURELY IN PLACE. FOR LOCATIONS OF MECHANICAL AND PLUMBING PENETRATIONS/EMBEDMENTS, SEE SHEETS M-1 AND P-1. FOR LOCATIONS OF ELECTRICAL PENETRATIONS/EMBEDMENTS, SEE SHEET E-1.
18. PROVIDE 3/4" CHAMFER ON EXPOSED CONCRETE EDGES.
19. AT THE LOCATION OF EACH SLAB CONTROL JOINT LINE, THE WELDED WIRE REINFORCEMENT SHALL BE DISCONTINUOUS (WIRE CUT OR SHEETS PLACED WITH A 1/4" TO 1" GAP BETWEEN ENDS) BEFORE PLACING CONCRETE.
20. UNLESS OTHERWISE SHOWN, MINIMUM COVER FOR CONCRETE REINFORCING SHALL BE 3".
21. CONCRETE FLOOR SLAB SHALL HAVE A SMOOTH, TROWELLED FINISH.
22. CURE CONCRETE BY ONE OF THE FOLLOWING METHODS:

(NOTE: DO NOT USED LIQUID MEMBRANE CURING COMPOUND.)

- A. COVER FINISHED, WETTED CONCRETE SLAB SURFACE WITH POLYETHYLENE SHEETING CONFORMING TO ASTM C171. LAP A MINIMUM OF 3 INCHES AT ADJOINING SHEETS. PREVENT DISPLACEMENT OF COVER DURING CURING PERIOD OF 7 DAYS MINIMUM. PATCH HOLES IN COVER WITH WATERPROOF TAPE. KEEP SLAB SURFACE WET DURING CURING PERIOD.
- B. COVER FINISHED SURFACE AND OTHER EXPOSED SURFACES WITH WET BURLAP AND MAINTAIN IN MOIST CONDITION FOR A MINIMUM OF SEVEN DAYS.

23. EXTERIOR CONCRETE APPROACH SLABS SHALL HAVE A LIGHTLY BROOMED FINISH, WITH STROKES RUNNING IN DIRECTION OF SLOPE.
24. CONCRETE SLAB CONTROL JOINTS SHALL BE MADE AS SHOWN IN DETAIL 9/S-4. JOINTS SHALL BE CUT WHEN THE CONCRETE SURFACE IS FIRM ENOUGH NOT TO BE DAMAGED BY THE CUTTING EQUIPMENT, AND NO LATER THAN 12 HOURS AFTER CONCRETE IS PLACED AND FINISHED.
25. FILL CONTROL JOINTS WITH A COLD-APPLIED, TWO COMPONENT, ELASTOMERIC POLYMER TYPE COMPOUND CONFORMING TO FEDERAL STANDARD SS-S-200. SLAB SHALL CURE FOR AS LONG AS PRACTICABLE BEFORE FILLING JOINTS, WITH A MINIMUM CURE TIME OF 60 DAYS, EXCEPT AS AUTHORIZED BY THE COTR.
26. EXPOSED VERTICAL SURFACES OF CONCRETE SHALL RECEIVE A SMOOTH RUBBED FINISH IN ACCORDANCE WITH ACI 301-89, ARTICLE 10.3.1.
27. PROTECT NEWLY FINISHED CONCRETE FROM DAMAGE AT ALL TIMES.
28. NO BACKFILL SHALL BE PLACED AGAINST NEWLY CONSTRUCTED CONCRETE FOR A PERIOD OF TEN DAYS UNLESS AUTHORIZED BY THE COTR.
29. PLACE BACKFILL IN A MANNER WHICH MINIMIZES UNEQUAL LOADING TO STRUCTURES AFFECTED DURING BACKFILLING OPERATIONS.
30. BASE PLATE GROUT: EQUAL TO "CEILCOTE 648 CP PLUS", AS MANUFACTURED BY MASTER BUILDERS, INC., CLEVELAND, OH (800) 628-9990.
31. PREPARE CONCRETE SURFACE AND INSTALL BASE PLATE GROUT IN ACCORDANCE WITH GROUT MANUFACTURER'S WRITTEN INSTRUCTIONS. FOR GROUT THICKNESSES AND ANCHOR BOLT SPACING OF AUTOCLAVE SUPPORT SADDLES, COMBUSTION CHAMBER, DOOR HINGE BASE PLATE, AND HOIST LIFT SYSTEM BASE PLATES, SEE REFERENCE DRAWINGS SK-12865R1-R1 & R2. PRIOR TO GROUTING, OBTAIN ASSURANCE FROM COTR THAT EQUIPMENT LOCATIONS AND ELEVATIONS ARE CORRECT FOR SYSTEM OPERATIONAL CAPABILITY.
32. DESIGN, FABRICATE, AND INSTALL PRE-ENGINEERED BUILDING IN ACCORDANCE WITH SECTION 13125 OF THE SPECIFICATIONS.
33. BUILDING SHALL BE DESIGNED FOR A 15 TON RATED CAPACITY MONORAIL HOIST TO RUN IN THE EAST-WEST DIRECTION AND COINCIDING WITH THE CENTERLINE OF THE AUTOCLAVE.
34. HOIST AND TROLLEY SYSTEM SHALL CONFORM TO THE CMAA STANDARDS AND APPLICABLE SECTIONS OF THE FOLLOWING SAFETY STANDARDS:

- * ASME B30.11-1993
- * ASME B30.16-1993
- * NASA NSS/GO 1740.9B-1991

HOIST AND TROLLEY SYSTEM REQUIREMENTS INCLUDE:

- * RATED CAPACITY: 15 TONS
- * LIFT HEIGHT: 20 FEET
- * ELECTRIC CHAIN HOIST (INCLUDE CHAIN STORAGE DEVICE)
- * TWO LIFTING SPEEDS: 4/1 FPM
- * HOIST CLASS: H-4
- * METHOD OF OPERATION: PENDANT
- * MOTOR DRIVEN TROLLEY (MAXIMUM SPEED: 50 FPM)
- * POWER SOURCE: ELECTRIC 230/3/60 OR 460/3/60
- * MONORAIL TROLLEY STOPS PROVIDED AT TERMINATION POINTS
- * MAXIMUM WEIGHT OF TROLLEY WITH HOIST: 1500 LBS.

INSTALL CRANE HOIST W/ PENDANT AND CHAIN BASKET ON WEST END OF MECHANISM. (SIDE AWAY FROM AUTOCLAVE).

HOIST AND TROLLEY SUGGESTED SOURCE: COLUMBUS-MCKINNON CORPORATION, AMHERST, NY (716) 689-5400

35. BUILDING COLUMN ANCHOR BOLT SIZES, LOCATIONS, AND EMBEDMENT LENGTH INTO CONCRETE SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FLOOR SLAB WITH EDGE BEAM CONSTRUCTION. COLUMN LOCATIONS MAY BE SHIFTED TO ACCOMMODATE MANUFACTURER'S STANDARD DETAILS.
36. BUILDING MANUFACTURER SHALL FURNISH FINAL DESIGN REACTIONS. IF FINAL DESIGN REACTIONS EXCEED THE PRELIMINARY REACTIONS (SHOWN ON SHEET S-1), ENSURE BUILDING FOUNDATION IS SATISFACTORY BY UTILIZING AN ENGINEER REGISTERED IN THE STATE OF ALABAMA TO VERIFY ADEQUACY OR REDESIGN AND SUBMIT BUILDING FOUNDATION IN ACCORDANCE WITH THE SPECIFICATIONS. SUBMIT FINAL BUILDING DESIGN REACTIONS AND FOUNDATION ADEQUACY VERIFICATION OR REDESIGN FOR APPROVAL PRIOR TO FLOOR SLAB WITH EDGE BEAM CONSTRUCTION.
37. NEW METAL BUILDING ADDITION SHALL INCLUDE CROSS BRACING AND/OR PORTAL FRAMING AS NECESSARY FOR CONFORMANCE TO SPECIFIED LOADING REQUIREMENTS. LOCATE BRACING SO THAT IT DOES NOT INTERFERE WITH DOOR OR WINDOW OPENINGS.
38. PROVIDE TEMPORARY BRACING AND/OR SUPPORT AS NECESSARY FOR LOADING DURING CONSTRUCTION.
39. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1-96.
40. REPAIR ALL DAMAGE MADE TO SURROUNDING AREA DURING CONSTRUCTION.

DEVELOPMENT AND SPLICE LENGTHS

FOR REINFORCING STEEL BARS PLACED IN 4000 PSI CONCRETE

* QUALIFYING PARAMETERS:

Code: ACI 318-95
Class B Splice
Concrete Design Compressive Strength: 4000 psi
Minimum Yield strength of reinforcing steel: 60 ksi
Reinforcement Location Factor = Coating Factor = Aggregate Factor = 1.0
Clear spacing of bars being developed or spliced is not less than bar diameter, and clear cover of bars being developed or spliced is not less than bar diameter, and stirrups and ties throughout development length are not less than the code minimum or clear spacing of bars being developed or spliced is not less than 2 bar diameters, and clear cover is not less than bar diameter.

Bar Size	Development Length	Tension Splice Length	Compression Splice Length
# 3	15	20	12
# 4	19	25	15
# 5	24	32	19
# 6	29	38	23
# 7	42	55	27
# 8	48	63	30
# 9	54	71	34
# 10	60	78	38
# 11	66	86	42
# 14	84	110	53
# 18	107	140	68

Bar sizes are listed in nominal 1/8 inch increments. Lengths are given in inches unless noted otherwise, where splices are required, use tension splice length.

* Note: If one or more actual conditions differs from the above parameters, refer to ACI 318-95, Chapter 12 for additional requirements.

REFERENCE DESIGN CHANGES
REVIEWED FOR INCORPORATION

RFI-007, 009, 017, 081

DESIGN DATA

ROOF LIVE LOAD	As Specified in the MBMA 1996 Low Rise Building Systems Manual
ROOF COLLATERAL LOAD	12 psf
WIND DESIGN LOADS	As Specified in the MBMA 1996 Low Rise Building Systems Manual
FOUNDATION DESIGN	1994 Standard Building Code
MONORAIL HOIST CAPACITY	15 Tons
CONCRETE FLOOR LIVE LOAD	400 psf
ALLOWABLE SOIL BEARING	Autoclave & Lift Table Foundation: 5000 psf Individual Column Footings: 2500 psf Continuous Footings: 2000 psf
CONCRETE	28 Day Compressive Strength: 4000 psi Max. Size Aggregate: 1-1/2 inches Air Entrainment: 4% to 7% Slump: 1 inch to 5 inches
REINFORCING STEEL	ASTM A615, Grade 60
HANDRAIL	1-1/4 inch nominal dia., SCH. 40, ASTM A500 Grade B or ASTM A501
AUTOCLAVE ANCHORS	1-3/8 inch bolt dia. DECO "Heavy-Duty Anchor", w/ 18" embedment mfg'd by DECO Manufacturing Company, Decatur, IL (800) 637-5861
HOIST PLATFORM SCREW JACK SYSTEM ANCHOR BOLTS (3/4" DIA.)	"Trubolt" Part No. WS-3470, as manufactured by ITW Ramset/Red Head, Paris, KY (800) 354-7432
HOIST PLATFORM SCREW JACK SYSTEM ANCHOR BOLTS (1" DIA.)	"Trubolt" Part No. WS-100120, as manufactured by ITW Ramset/Red Head, Paris, KY (800) 354-7432
COMBUSTION CHAMBER ANCHOR BOLTS	"Trubolt" Part No. WS-3470, as manufactured by ITW Ramset/Red Head, Paris, KY (800) 354-7432
BUILDING COLUMN ANCHOR BOLTS	ASTM A325
GUARDRAIL AND GRATING SUPPORT ANGLE ANCHOR BOLTS	"Trubolt" Part No. WS-3470, as manufactured by ITW Ramset/Red Head, Paris, KY (800) 354-7432

REDUCED SIZE DRAWING

DO NOT SCALE

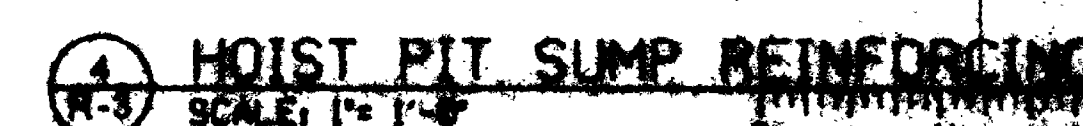
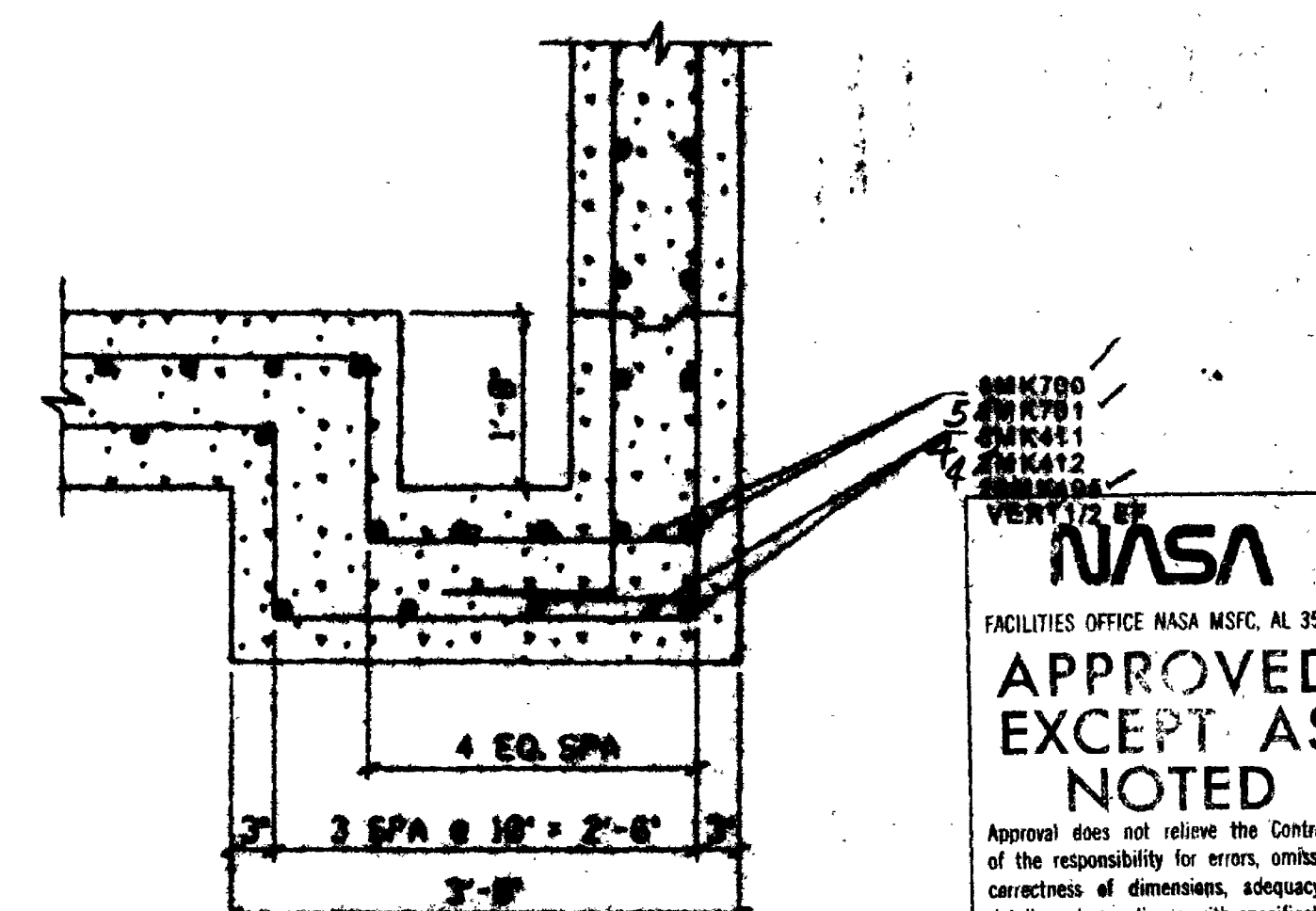
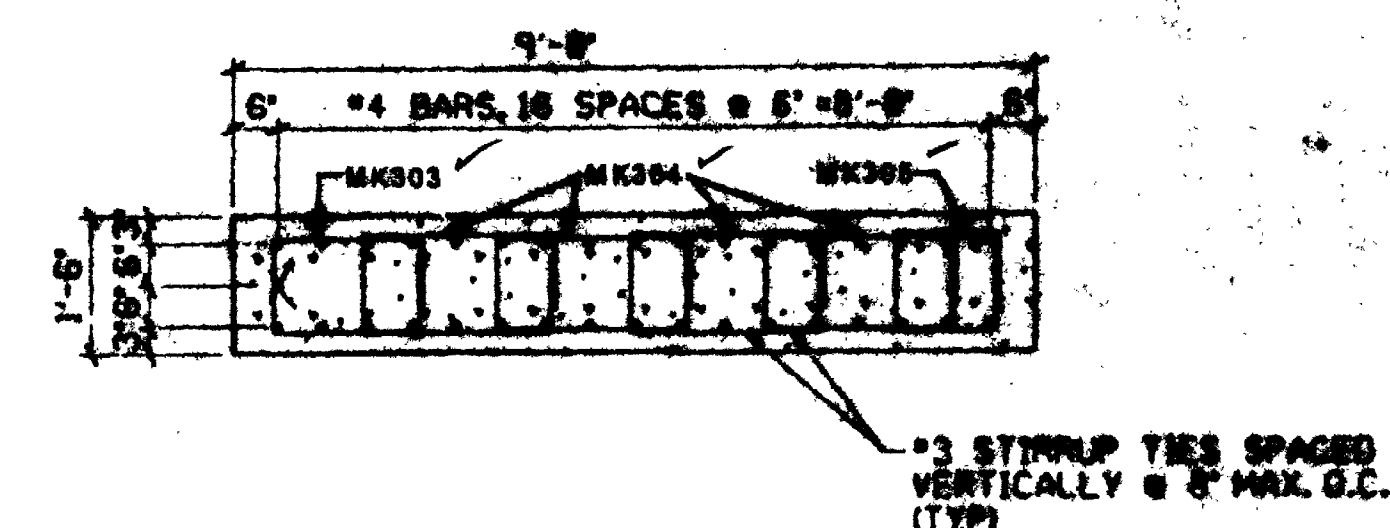
CADD DRAWING

CHANGES TO THIS DRAWING SHALL BE MADE
12865 ON CADD ONLY.
11-15-96 LATEST CADD UPDATE: 03-09-09
JRW BY: G.BATCHELOR 04:30 PM

CONCURRENCE:	/ / / /								
CONCURRENCE:	/ / / /								
CONCURRENCE:	/ / / /								
CONCURRENCE:	JOHN R. NEBRIG / 06 / 23 / 97	REV.	BY	DATE	AS-BUILT PER REDLINES	98088	RDP	LWG	
MAINTENANCE	CONCURRENCE: J.H. VICK / 06 / 24 / 97								
USING OFFICE	CONCURRENCE: M.L. McINTOSH / 06 / 19 / 97								
ENVIRONMENTAL HEALTH	CONCURRENCE: DENNIS S. DAVIS / 06 / 19 / 97								
SAFETY OFFICE	CONCURRENCE: M.E. MANN								
COMMUNICATIONS OFFICE	/ 06 / 18 / 97								
TELECOMMUNICATIONS EQUIPMENT AFFECTED BY THIS CONTRACT WORK IS NOT TO BE ALTERED OR REMOVED BY THE CONTRACTOR, CONTACT THE COTR IN THE EVENT OF A CONFLICT.									
REF. NO.	AE FIRM: AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA	NASA AE CONTRACT NO. NASA 8-40083				SUBMITTED: HOWARD C. BOZEMAN			
	AE1 DATE: 01-17-97	APPROVAL/RECOMMEND: R.B. FELDER				ACCEPTED FOR CONSTRUCTION: J. CLARK BOAZ			
	DESIGNED: D. SELLERS	APPROVAL/RECOMMEND: ARTHUR HARGROVE JR				DWG NO.			
	DRAWN: R. WILLIS	AJT & ASSOCIATES, INC.				FAC-F0-4707-S2			
	CHECKED: R. TALANKO	DESIGN DATE: 06-24-97				SHEET 14 OF 33			
	SCALE: AS NOTED	SPEC. NO. BMMS-3							

S-2

OF 10



VENT 172 RF
NASA
 FACILITIES OFFICE NASA MSFC, AL 35894
APPROVED
EXCEPT AS
NOTED
 Approval does not relieve the Contractor of the responsibility for errors, omissions, correctness of dimensions, adequacy of details and compliance with specifications.
 DATE *1/27/78*
DRS

SHERMAN INTERNATIONAL INC.
NATIONAL

CADD DWG.

CHANGES TO THIS DRAWING SHALL BE MADE
 12865R ON CADD ONLY. 03-10-09
 03-09-09 LATEST CADD UPDATE: 01:30 PM
 GAB BY: G. BATCHELOR

	GB	03-09-09	THIS SHEET ADDED PER VENDOR SUBMITTAL						
REV.	BY	DATE	REVISION				C.I. NO.	APPROVED	

 Marshall Space Flight Center
Huntsville, Alabama 35812

BUILDING 4707
INSTALL AUTOCLAVE
HOIST PLATFORM PIT PLAN, SECTION, AND DETAILS - VENDOR DRAWING

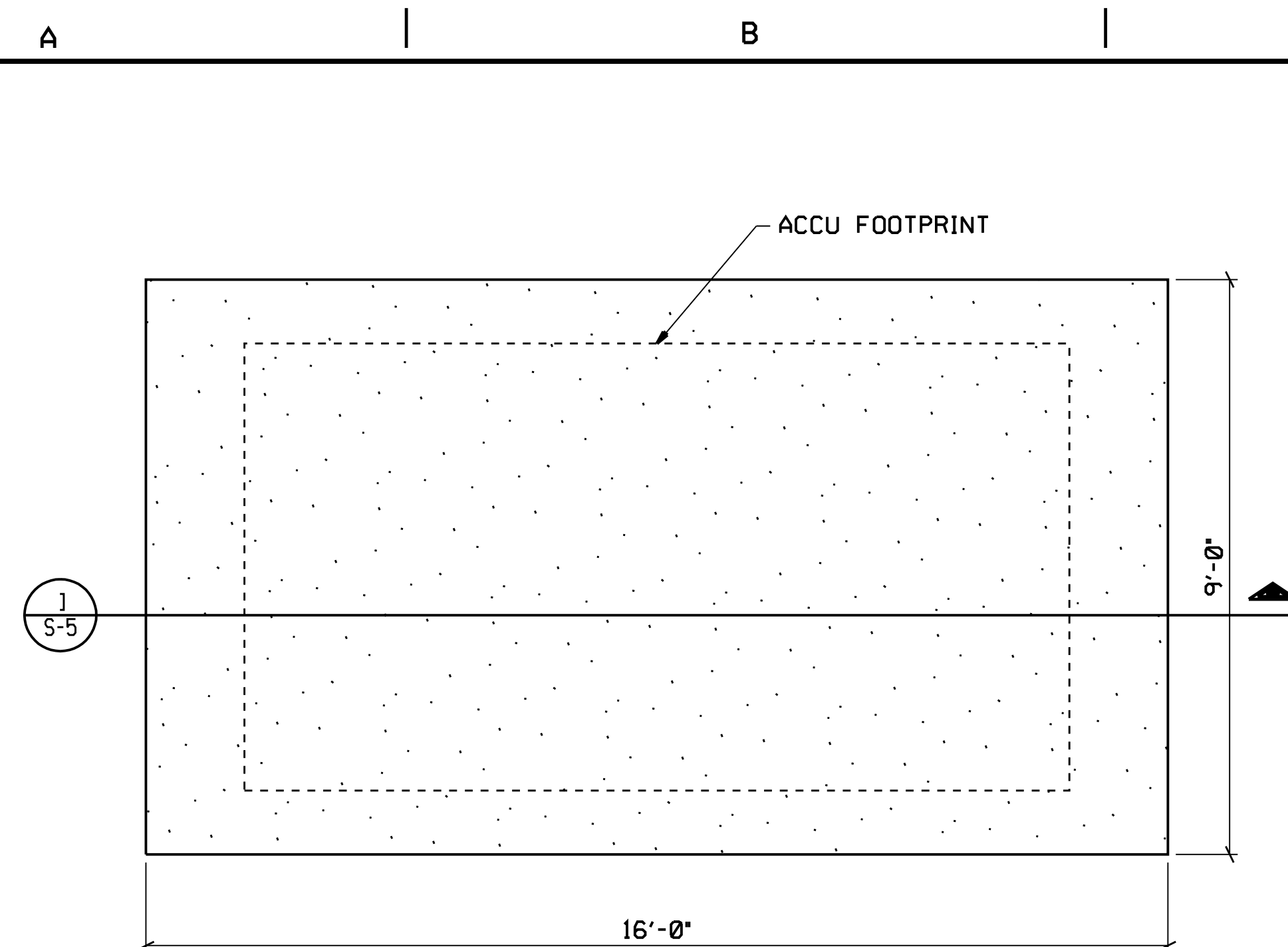
REF. NO. S3.1

DRAWING NO.	FAC-FQ-4707-S3.1
SHEET 16 OF 32	

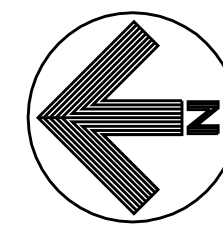
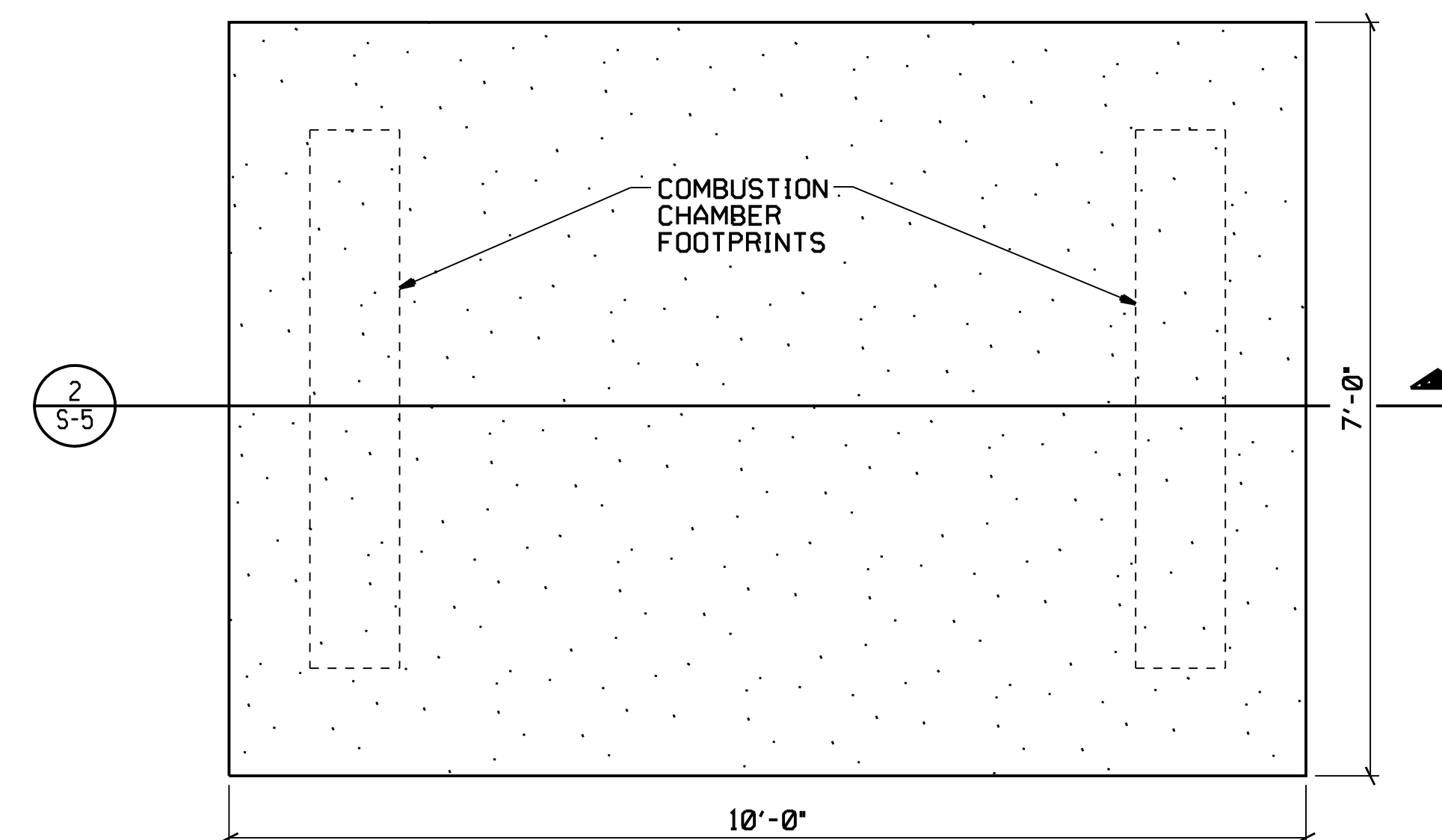


REDUCED SIZE DRAWING		CADD DRAWING	
DO NOT SCALE		CHANGES TO THIS DRAWING SHALL BE MADE 12865 ON CADD ONLY. 11-21-96 LATEST CADD UPDATE: <u>JRW</u> BY: G. BACHELOR	
CONCURRENCE:			
CONCURRENCE:			
CONCURRENCE:			
CONCURRENCE:			
MAINTENANCE			
CONCURRENCE:			
USING OFFICE			
CONCURRENCE:			
ENVIRONMENTAL HEALTH			
CONCURRENCE:			
SAFETY OFFICE			
CONCURRENCE:			
COMMUNICATIONS OFFICE			
TELECOMMUNICATIONS EQUIPMENT AFFECTED BY THIS CONTRACT WORK IS NOT TO BE ALTERED OR REMOVED BY THE CONTRACTOR, CONTACT THE CDJR IN THE EVENT OF A CONFLICT.			
REF. NO.			
S - 4			

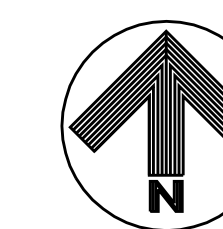
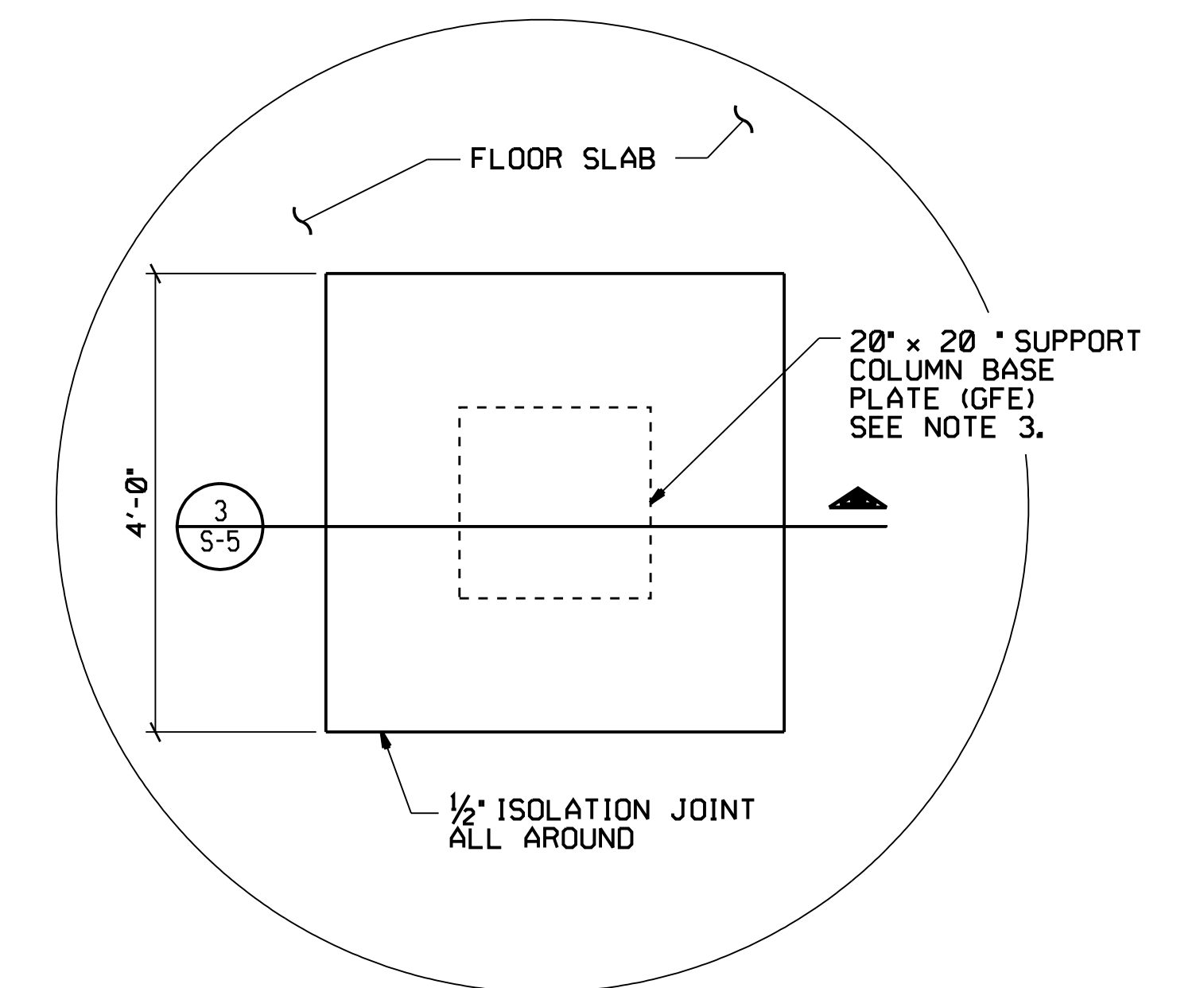
NASA		Marshall Space Flight Center	
Huntsville, Alabama 35812		WORK REQUEST NO. 1286-0000-288-S.R	
BUILDING 4707		INSTALL AUTOCLAVE	
SECTIONS AND DETAILS		AE FIRM:	
AJT & ASSOCIATES, INC.		NASA AE CONTRACT NO.	
HUNTSVILLE - ALABAMA		NASA 8-40083	
HOWARD C. BOZEMAN		R.B. FELDER	
AE1 DATE: 01-17-97		AB21 DATE: 06-24-97	
DESIGNED D. SELLERS		APPROVAL REQUIRED	
DRAWN R. WILLIS		ARTHUR HARGROVE JR	
CHECKED R. TALIANKO		AJT & ASSOCIATES, INC.	
SCALE AS NOTED		DESIGN DATE: 06-24-97	
		SPEC. NO. BMMS-3	
		ACCEPTED FOR CONSTRUCTION	
		J. CLARK BOAZ	
		AB41 DATE: 06-25-97	
		DWG NO.	
		FAC-FQ-4707-S4	
		SHEET 17 OF	



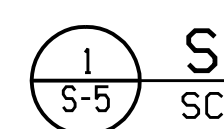
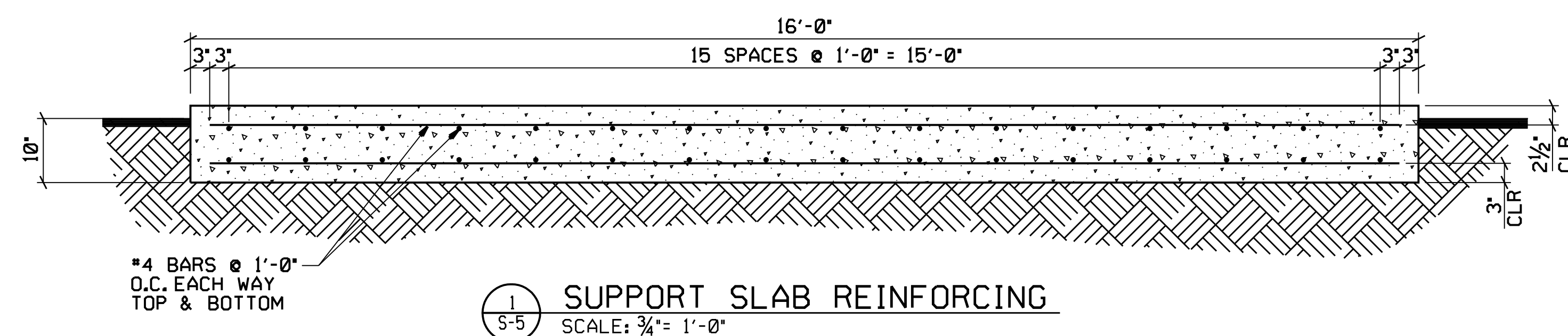
RELOCATED AIR CONDITIONER CONDENSER UNIT SUPPORT SLAB PLAN
SCALE: 1/2" = 1'-0"



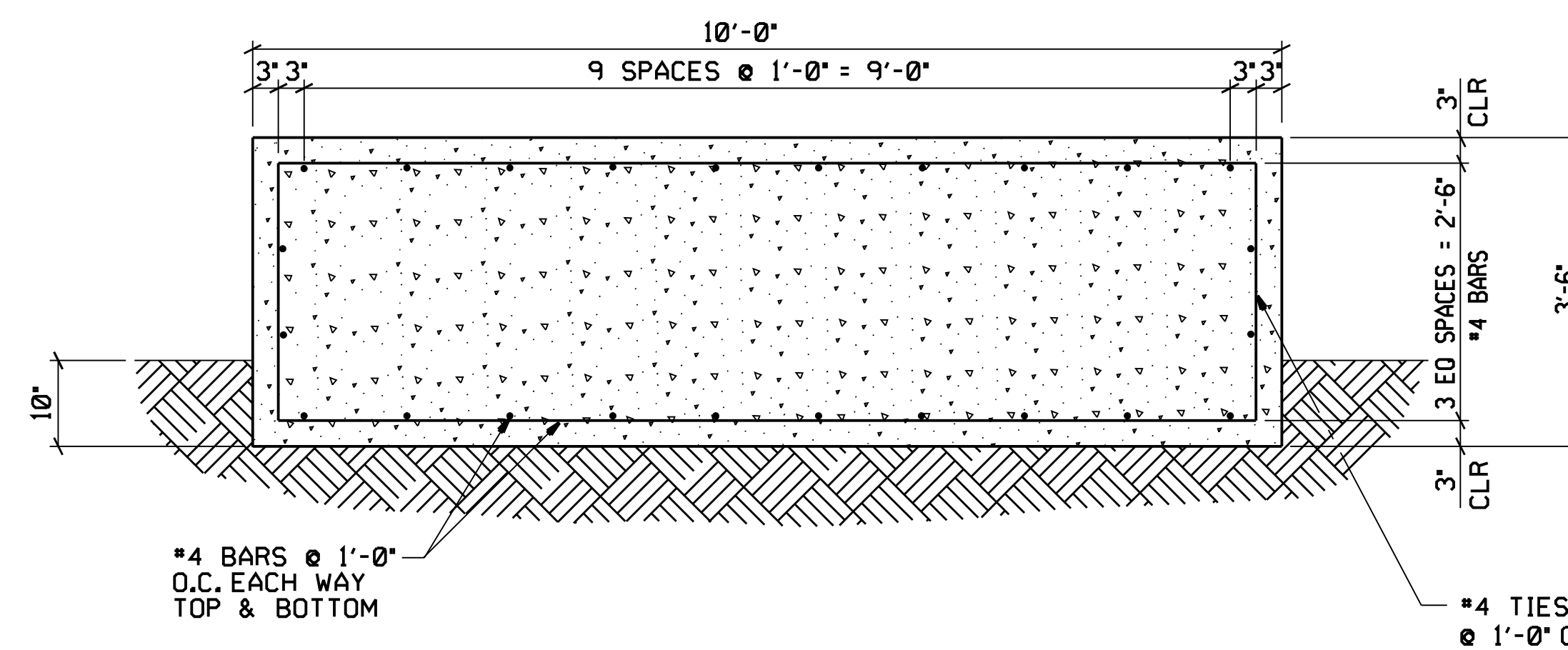
COMBUSTION CHAMBER SUPPORT SLAB PLAN
SCALE: $\frac{3}{4}" = 1'-0"$



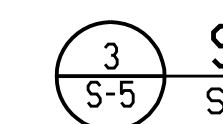
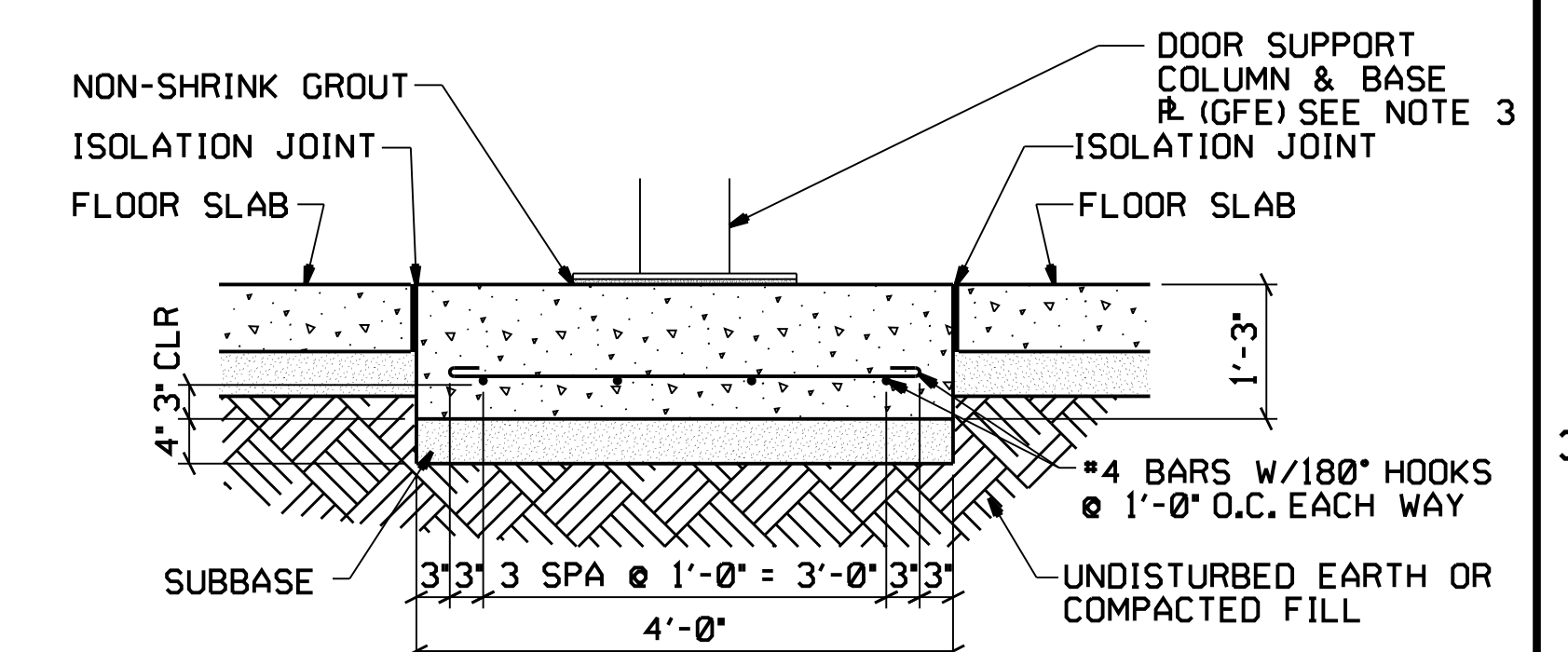
AUTOCLAVE DOOR HINGE SUPPORT SLAB PLAN
SCALE: $\frac{3}{4}" = 1' - 0"$



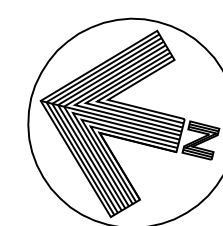
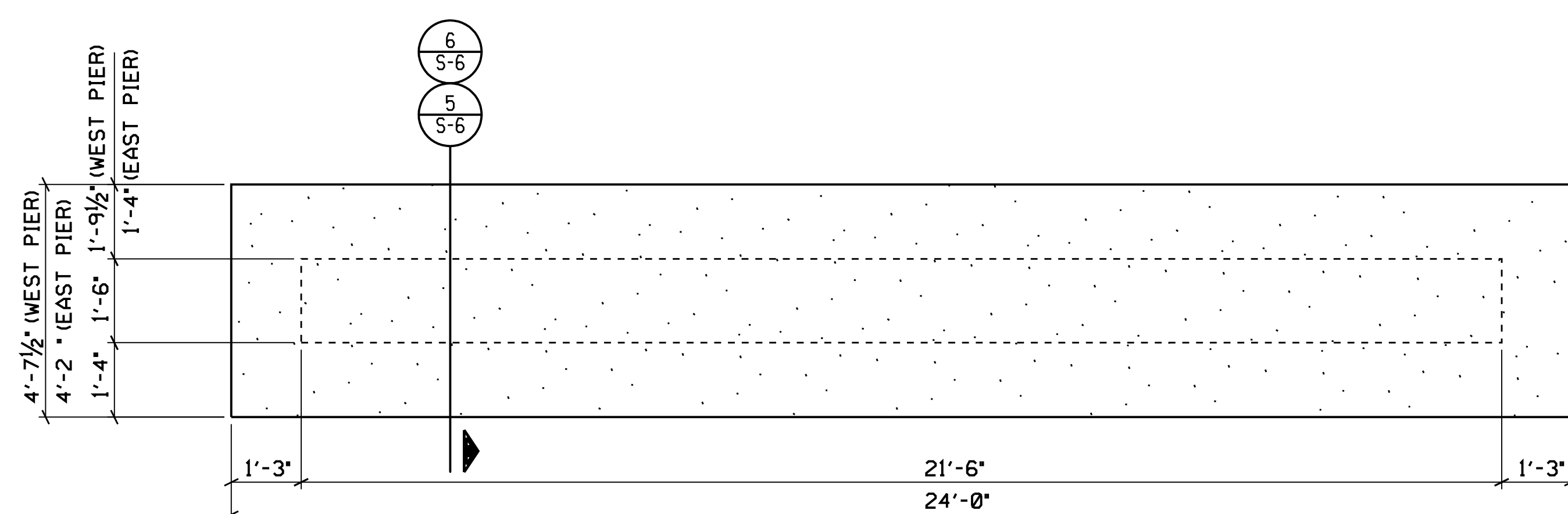
SUPPORT SLAB REINFORCING
SCALE: $\frac{3}{4}" = 1'-0"$



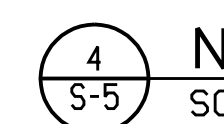
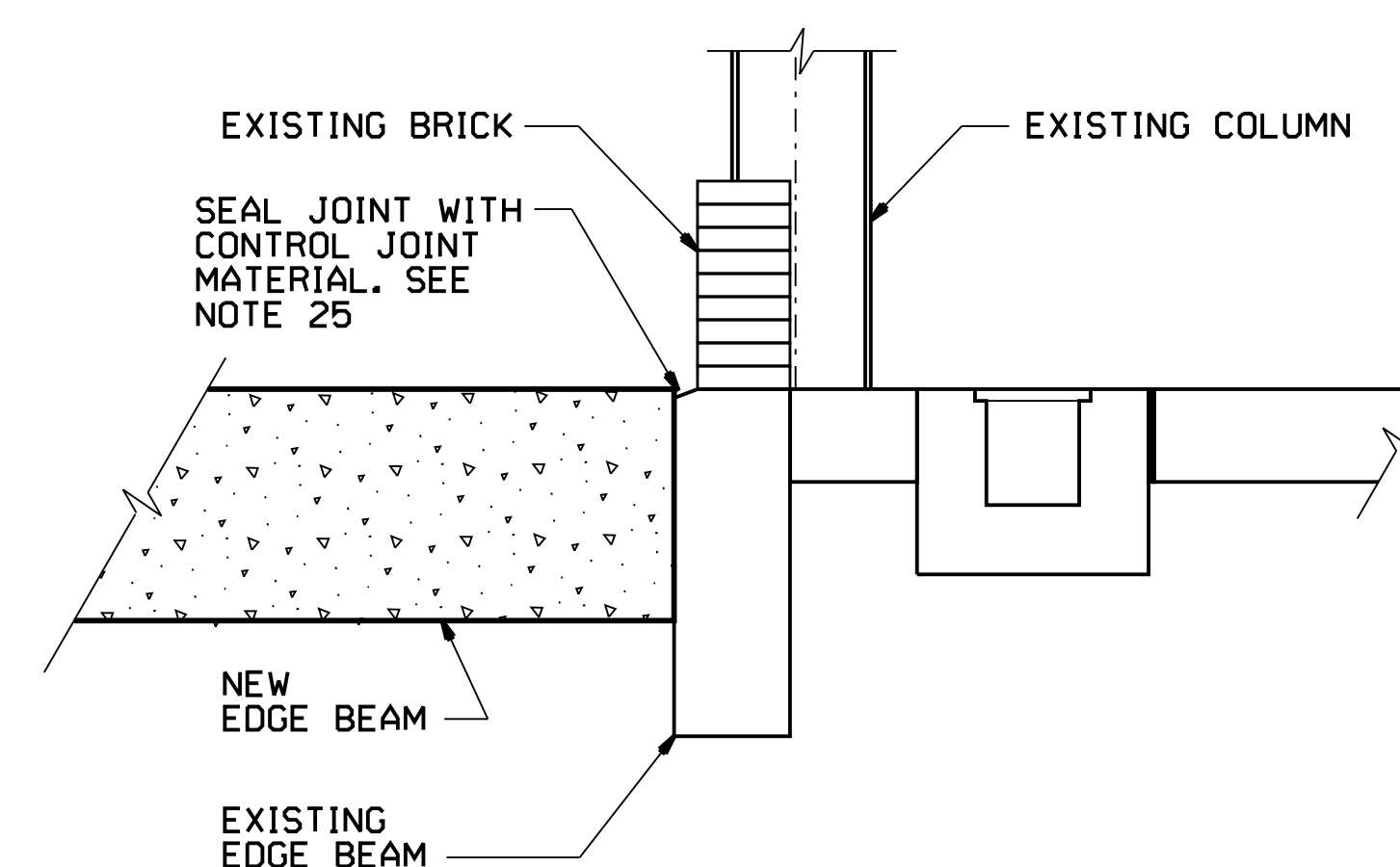
SUPPORT SLAB REINFORCING
SCALE: $\frac{3}{4}" = 1'-0"$



SUPPORT SLAB REINFORCING
SCALE: $\frac{3}{4}" = 1'-0"$



AUTOCLAVE SUPPORT PIER PLAN
SCALE: $\frac{1}{2}" = 1'-0"$



NEW/EXISTING EDGE BEAM INTERFACE
SCALE: $\frac{3}{4}" = 1'-0"$

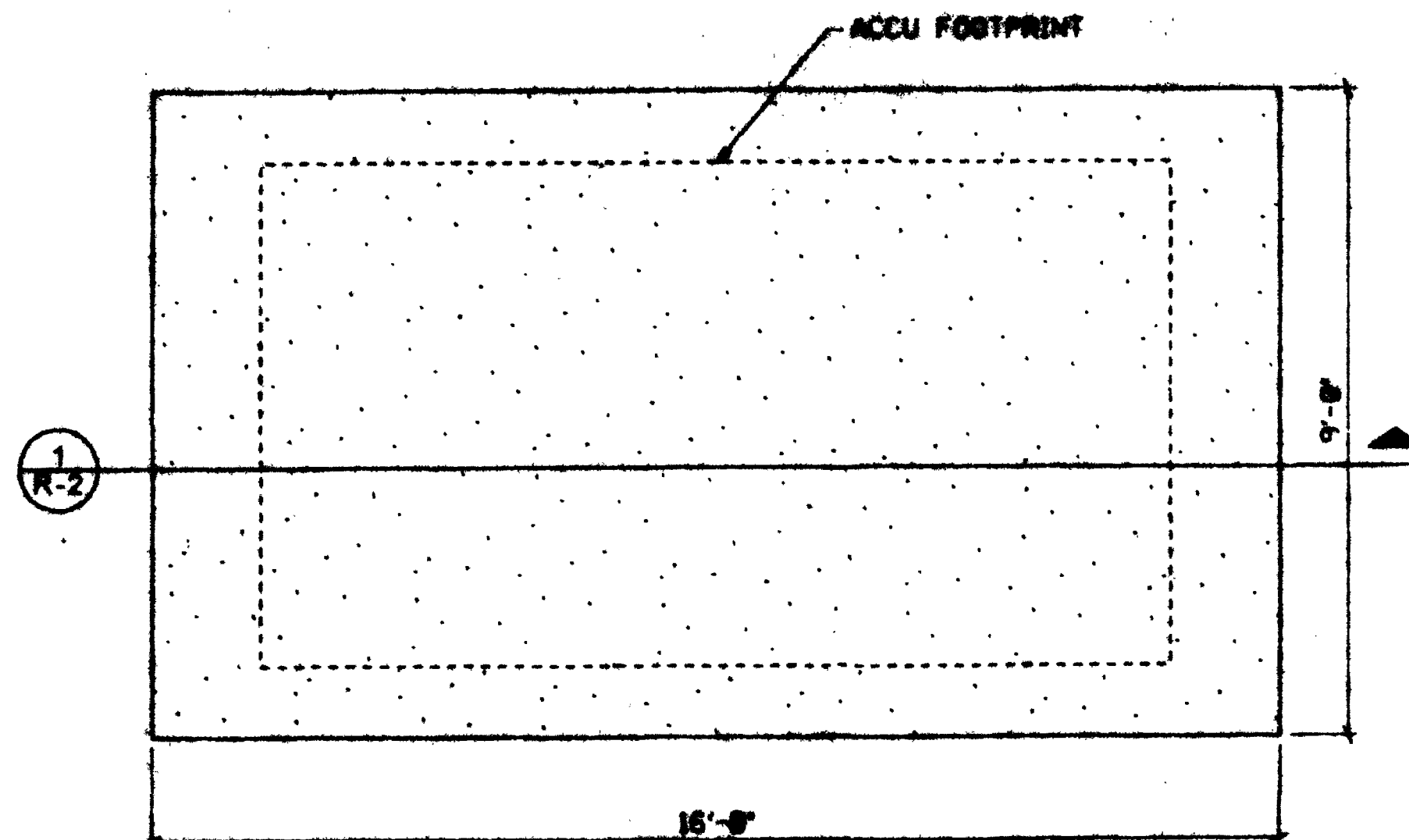
1 REFERENCE DESIGN CHANGES
REVIEWED FOR INCORPORATION
DCR-003, 035, 037

REDUCED SIZE DRAWING				CADD DRAWING			
DO NOT SCALE				CHANGES TO THIS DRAWING SHALL BE MADE ON CADD ONLY. 11-21-96 LATEST CADD UPDATE: 03-10-09 <u>JRW</u> BY: G.BATCHELOR 0900 AM			

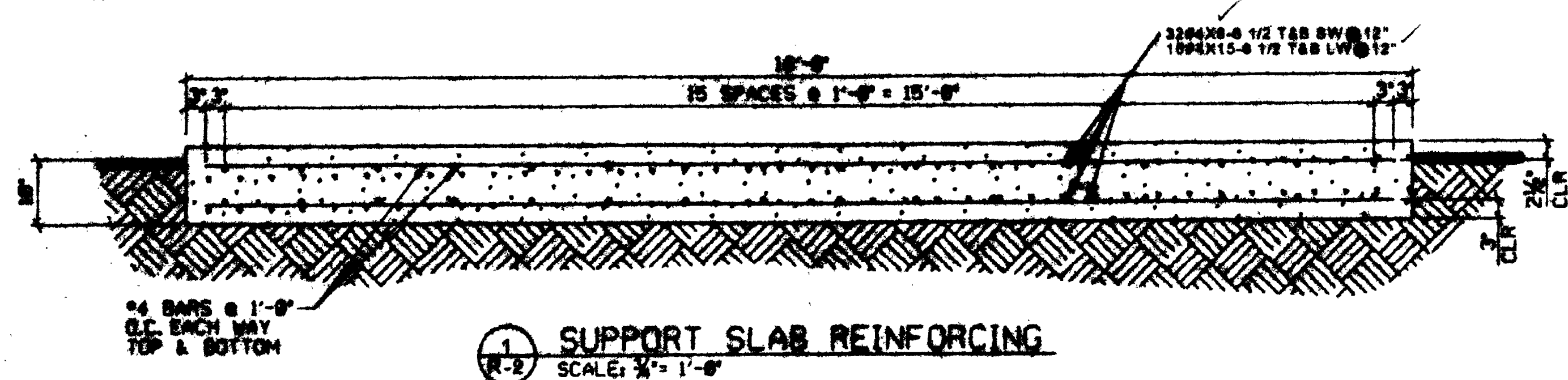
CONCURRENCE:							
CONCURRENCE:	/	/	/	/	/	/	/
CONCURRENCE:	/	/	/	/	/	/	/
CONCURRENCE:	/	/	/	/	/	/	/
CONCURRENCE:	<div style="float: right; text-align: right;"> </div>						
CONCURRENCE:	JOHN R. NEBRIG	REV.	BY	DATE	AS-BUILT PER REDLINE	REVISION	89888
MAINTENANCE	/06 /23 /97 /					RDP	LWG
CONCURRENCE:	J.H. VICK					C.I.J. NO.	APPROVED
USING OFFICE	/06 /24 /97 /	Marshall Space Flight Center Huntsville, Alabama 35812					
CONCURRENCE:	M.L. MCINTOSH	WORK REQUEST NO. 1286-0000-288-5.R					
ENVIRONMENTAL HEALTH	/06 /19 /97 /	BUILDING 4707					
CONCURRENCE:	DENNIS S. DAVIS	INSTALL AUTOCLAVE					
SAFETY OFFICE	/06 /19 /97 /	SECTIONS AND DETAILS					
CONCURRENCE:	M.E. MANN						
COMMUNICATIONS OFFICE	/06 /18 /97 /						
TELECOMMUNICATIONS EQUIPMENT AFFECTED BY THIS CONTRACT WORK IS NOT TO BE ALTERED OR REMOVED BY THE CONTRACTOR, CONTACT THE CDTR IN THE EVENT OF A CONFLICT.		AE FIRM: AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA				NASA AE CONTRACT NO. NASA 8-40083	
REF. NO.		SUBMITTED HOWARD C. BOZEMAN		APPROVAL RECOMMENDED R.B. FELDER		ACCEPTED FOR CONSTRUCTION J. CLARK BOAZ	
		A/E: DATE: 01-17-97		A/B21 DATE: 06-24-97		A/B41 DATE: 06-25-97	
		DESIGNED D. SELLERS		APPROVAL RECOMMENDED ARTHUR HARROVE JR		DWG NO.	
		DRAWN R. WILLIS		AJT & ASSOCIATES, INC.		FAC-F0-4707-S5	
		CHECKED R. TALIANKO		DATE: 06-24-97			
		SCALE: AS NOTED		SPEC. NO. RMMS-3		SHEET 18 OF 33	

S-5

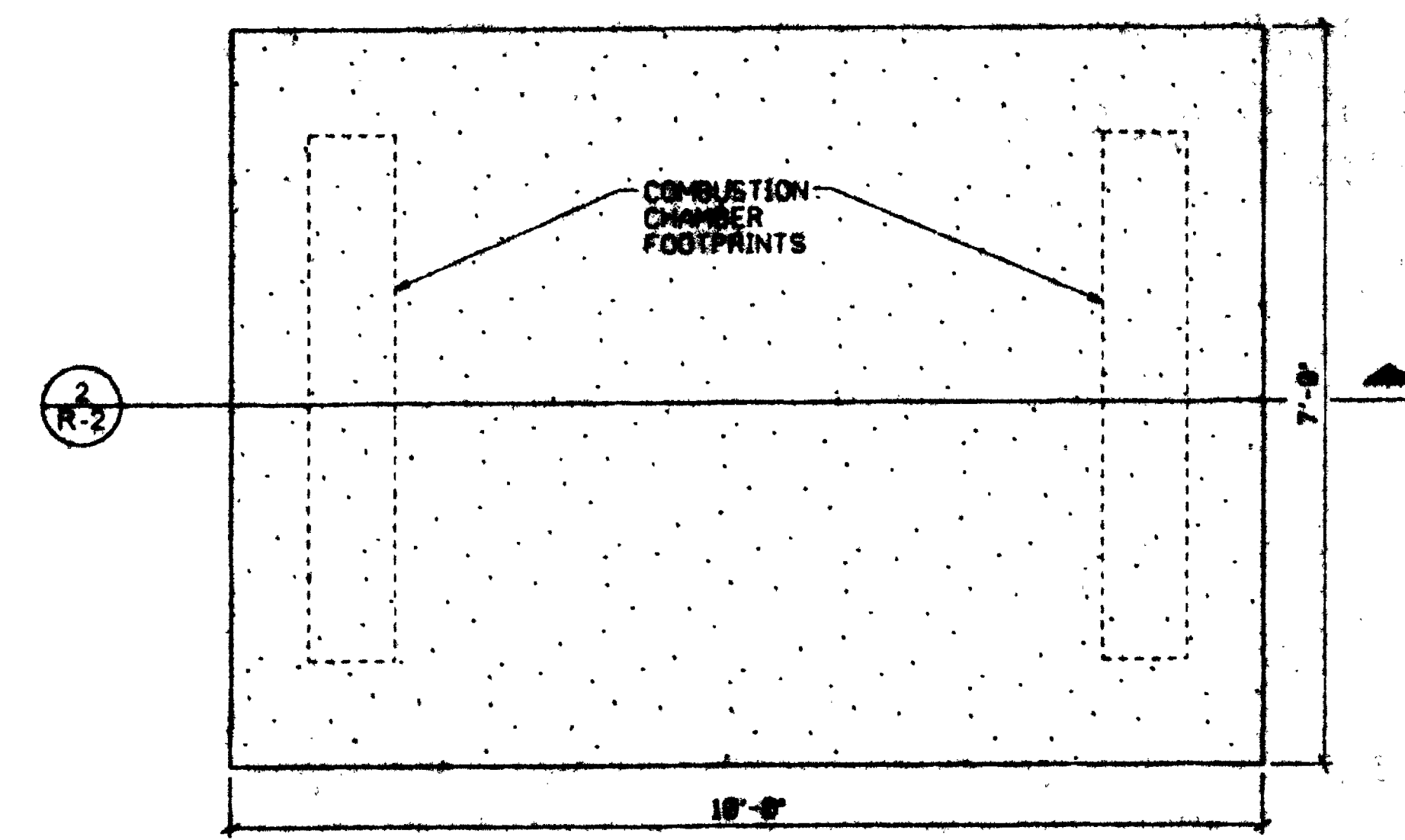
A B C D E F G



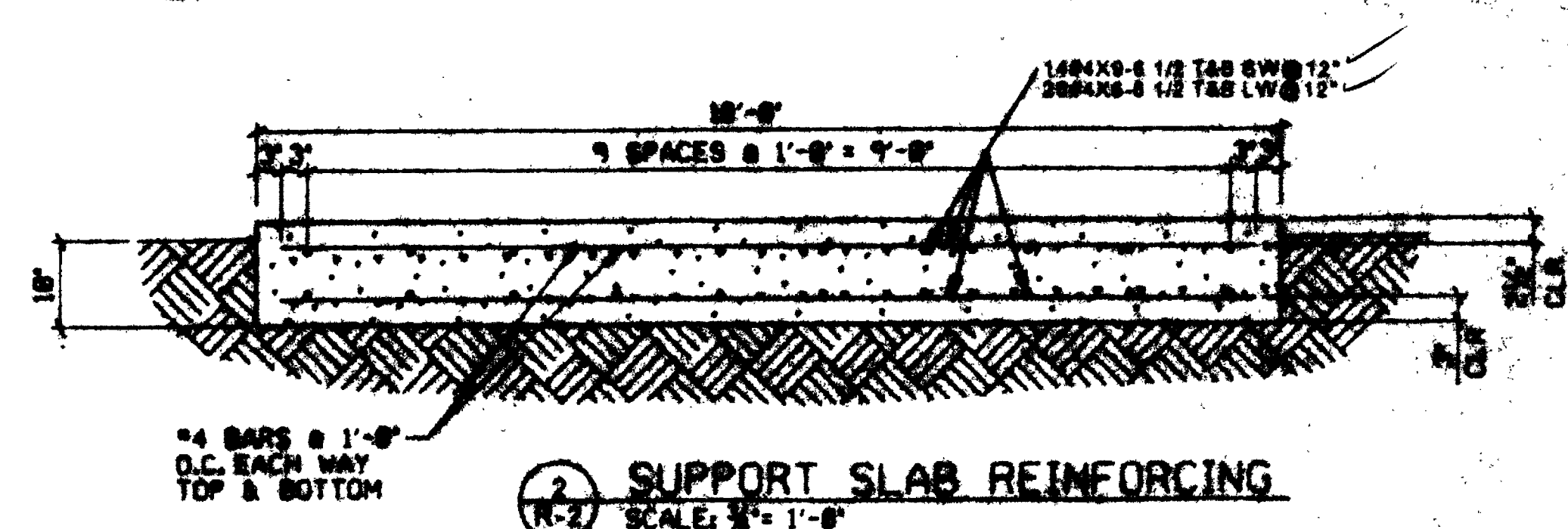
↑ **RELOCATED AIR CONDITIONER CONDENSER UNIT SUPPORT SLAB PLAN**
SCALE: 1/4" = 1'-0"



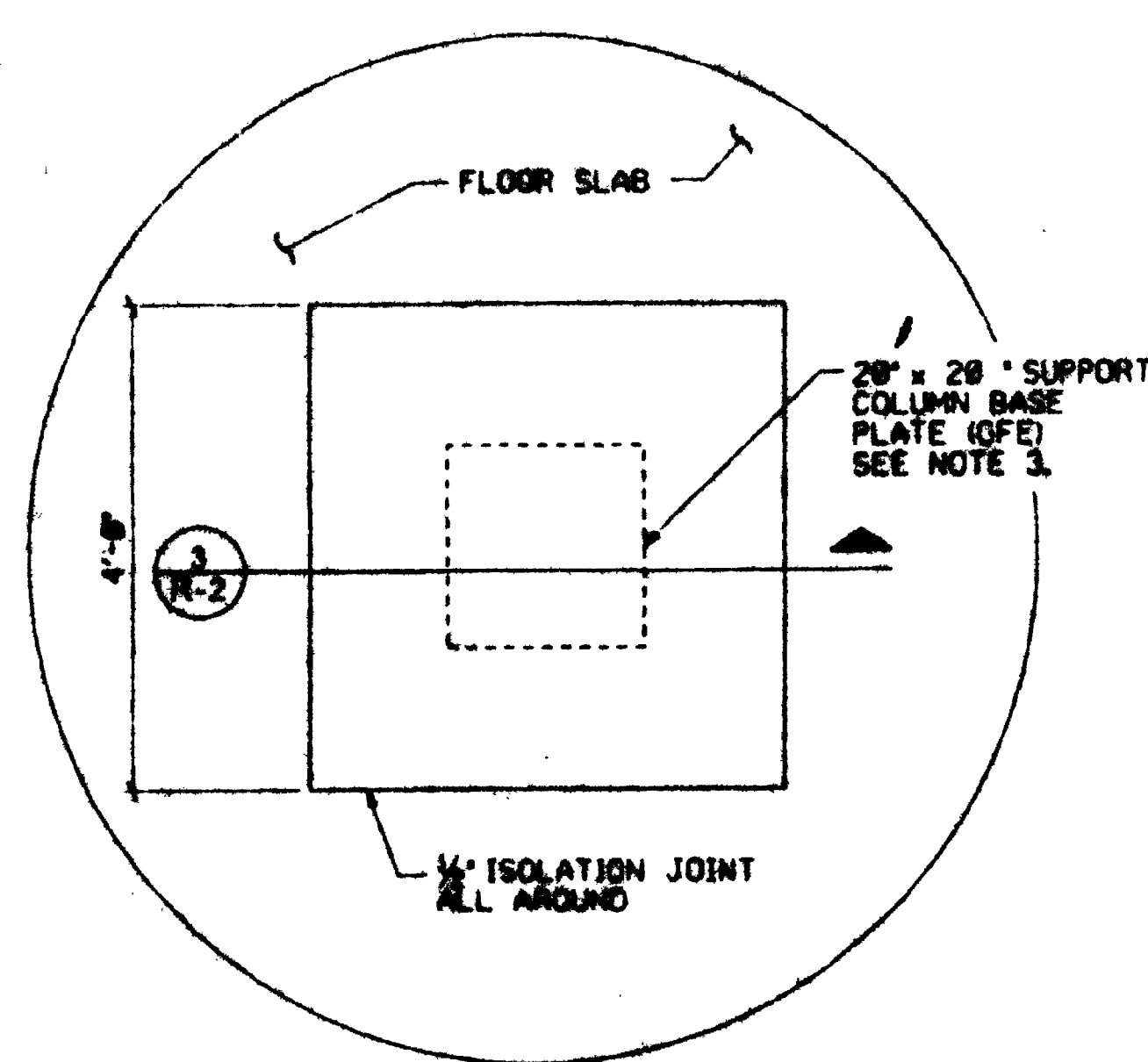
① **SUPPORT SLAB REINFORCING**
SCALE: 1/4" = 1'-0"



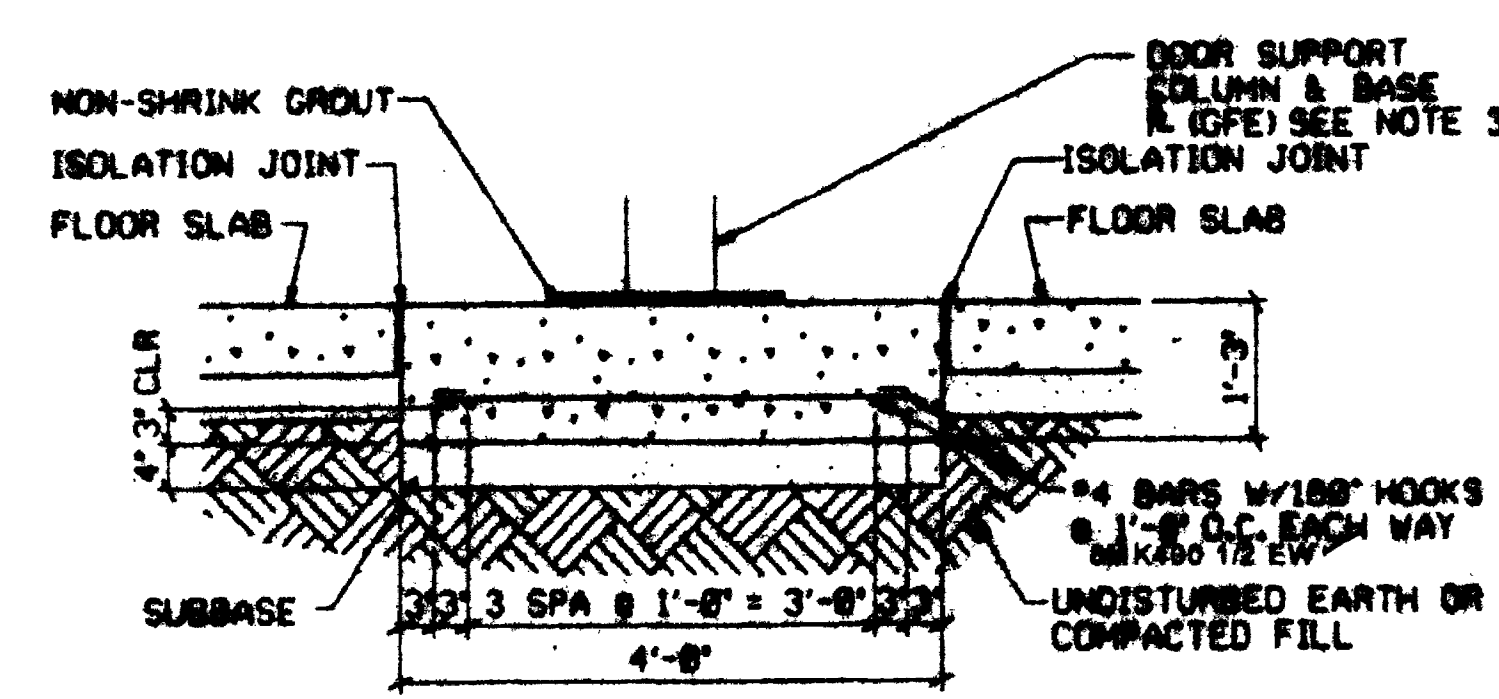
← **COMBUSTION CHAMBER SUPPORT SLAB PLAN**
SCALE: 1/4" = 1'-0"



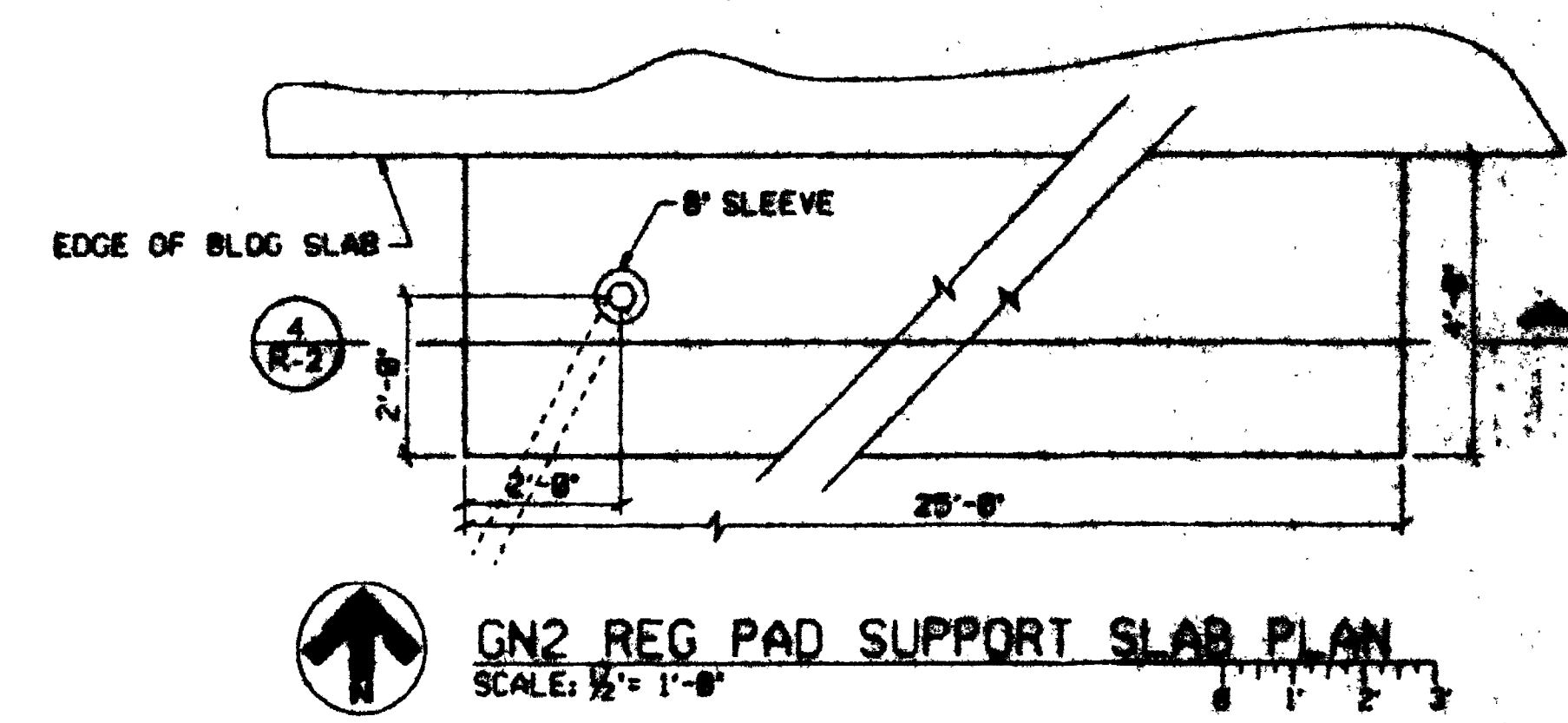
② **SUPPORT SLAB REINFORCING**
SCALE: 1/4" = 1'-0"



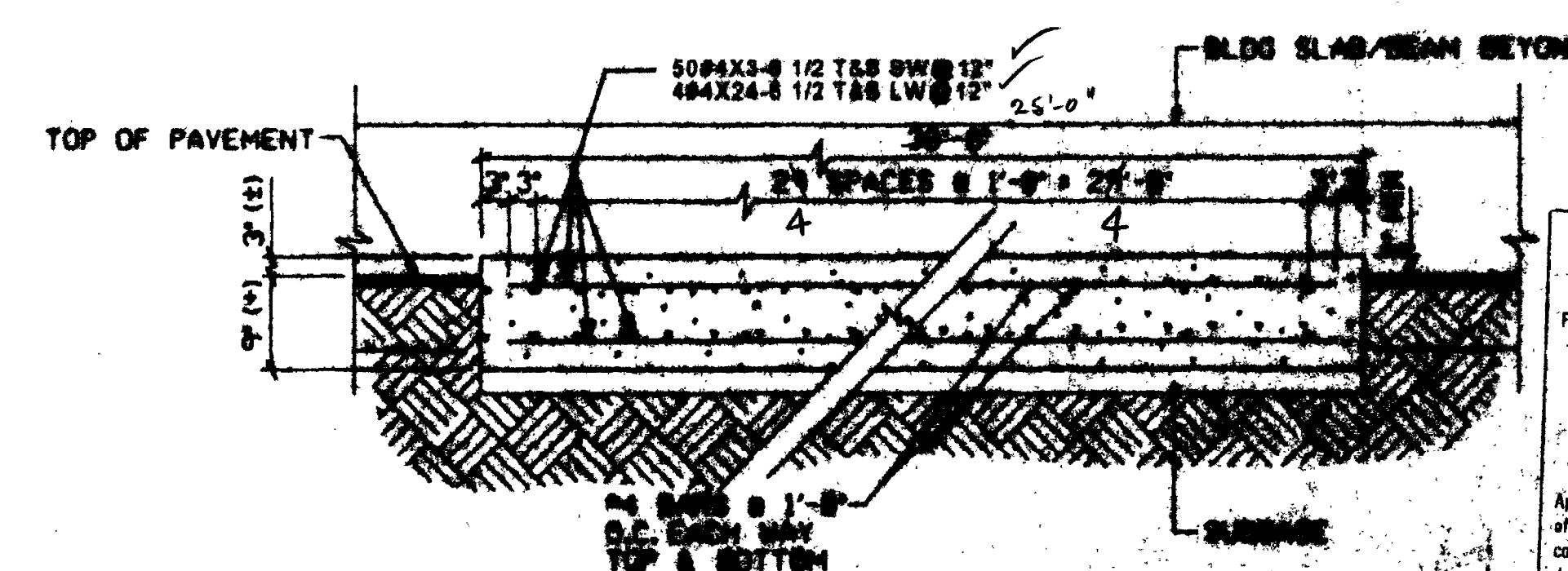
↑ **AUTOCLAVE DOOR HINGE SUPPORT SLAB PLAN**
SCALE: 1/4" = 1'-0"



③ **SUPPORT SLAB REINFORCING**
SCALE: 1/4" = 1'-0"



↑ **GN2 REG PAD SUPPORT SLAB PLAN**
SCALE: 1/4" = 1'-0"



④ **SUPPORT SLAB REINFORCING**
SCALE: 1/4" = 1'-0"

NASA
FACILITIES OFFICE NASA MSC, AL 358
APPROVED EXCEPT AS NOTED
Approval does not release the Contractor of the responsibility to ensure compliance with all applicable codes, standards, specifications, and drawings.
1/27/98

SHERMAN INTERNATIONAL INC.
Huntsville, AL

CADD DWG.	
CHANGES TO THIS DRAWING SHALL BE MADE ON CADD ONLY.	
12865R	03-10-09
03-09-09	LATEST CADD UPDATE:
GAB	BY: G. BATCHELOR 02:00 PM

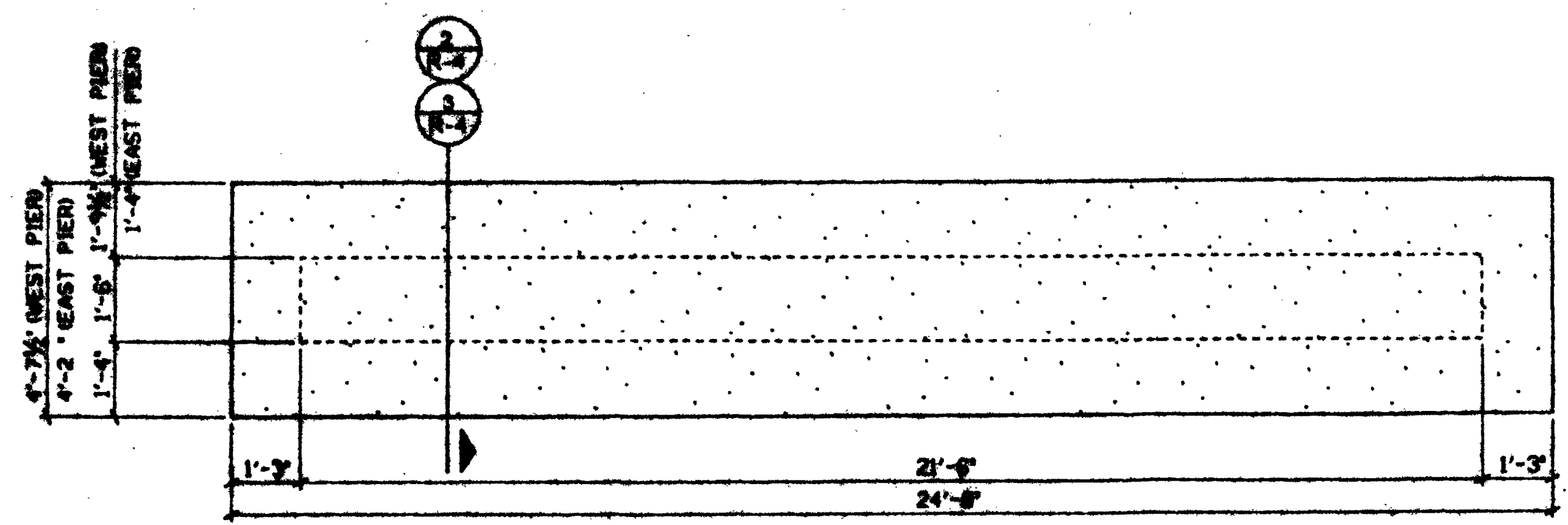
REV.	BY	DATE	REVISION	C.L. NO.	APPROVED
1	GB	03-09-09	THIS SHEET ADDED PER VENDOR SUBMITTAL		

Marshall Space Flight Center
Huntsville, Alabama 35812

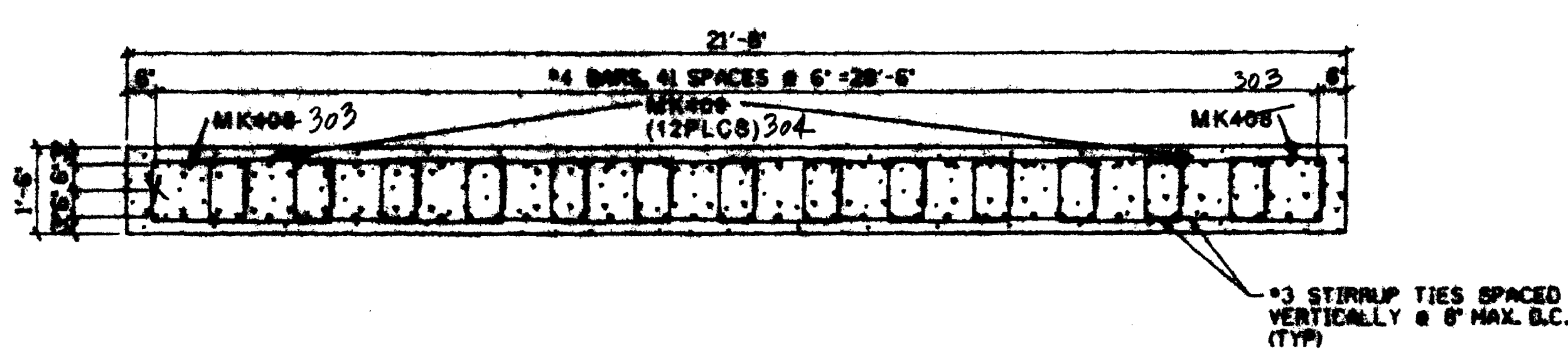
BUILDING 4707
INSTALL AUTOCLAVE
SLAB PLANS AND SLAB REINFORCING DETAILS- VENDOR DRAWING

DRAWING NO.
FAC-F0-4707-S5.1
SHEET 19 OF 33

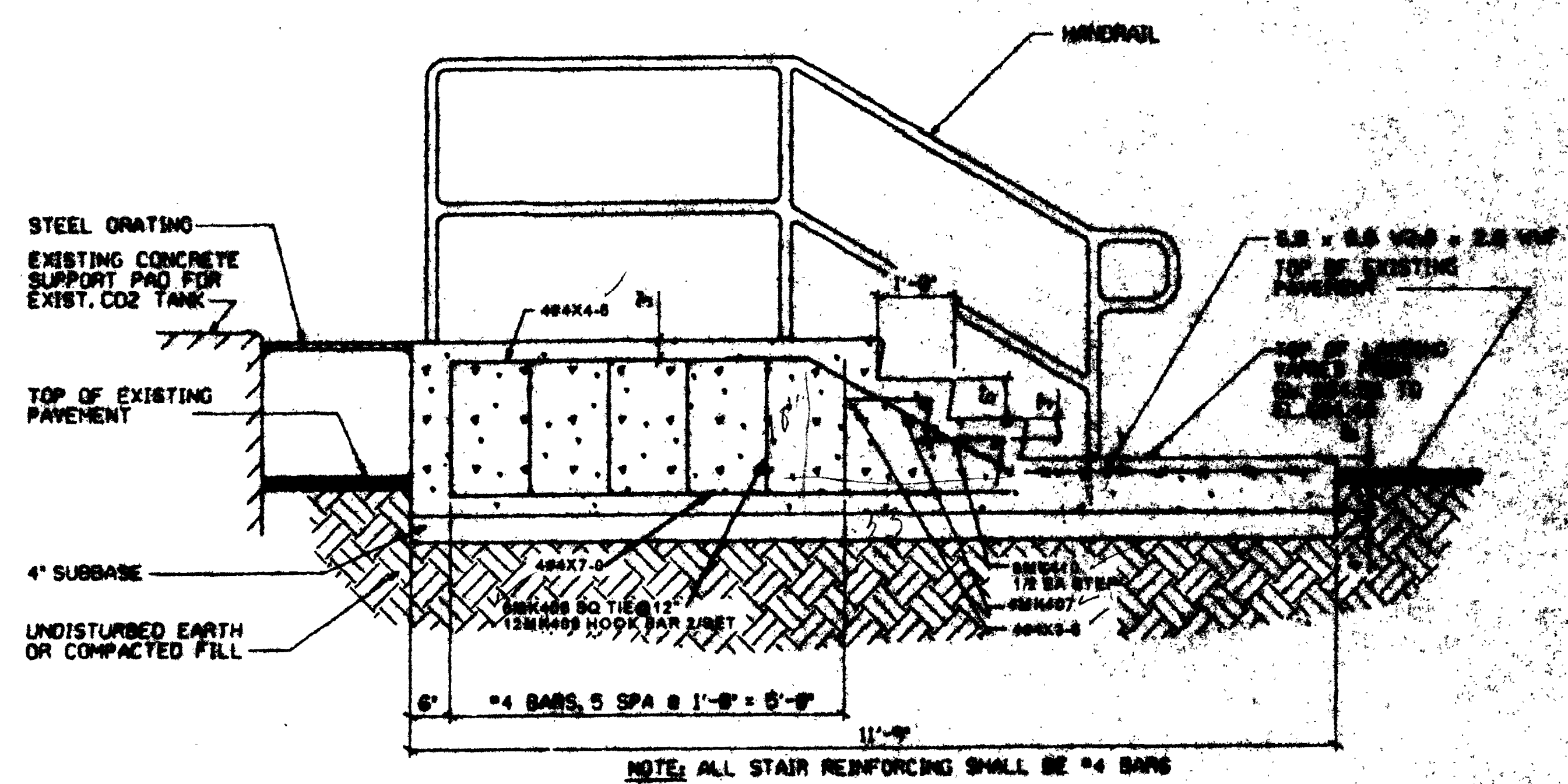
REF. NO. S5.1



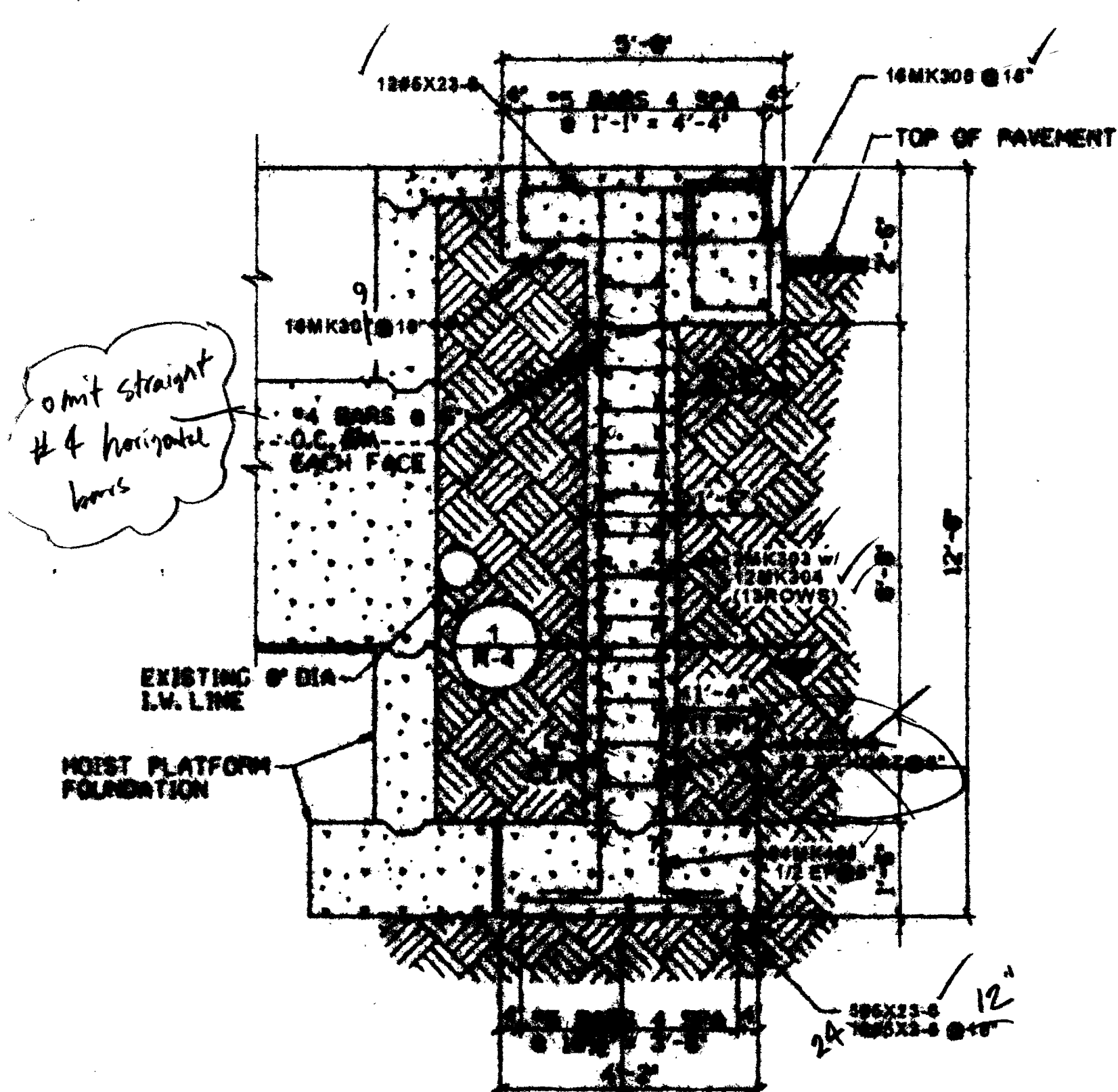
AUTOCLOAVE SUPPORT PIER PLAN
SCALE: 1/4" = 1'-0"



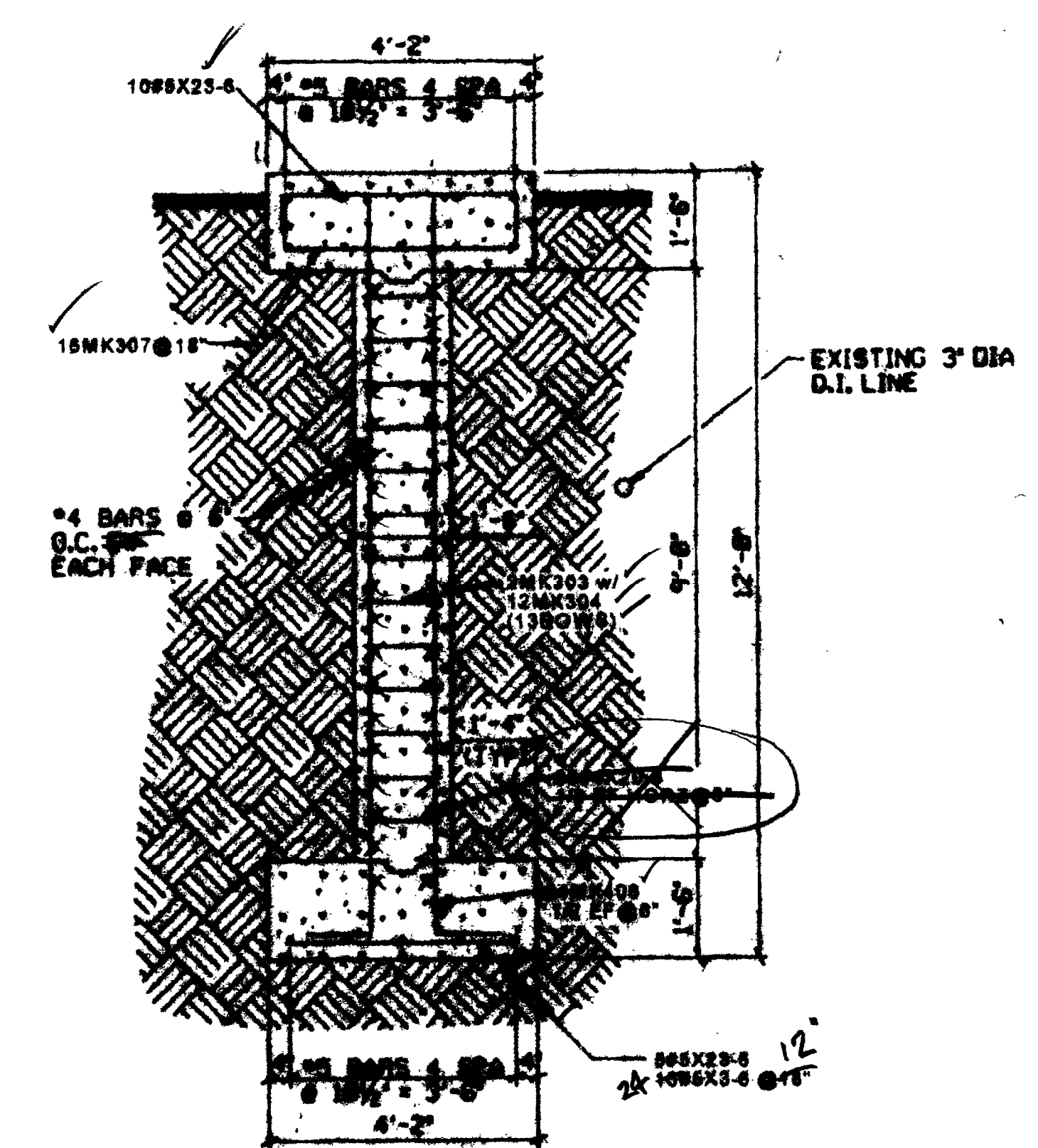
AUTOCLOAVE SUPPORT COLUMN REINFORCING
SCALE: 1/4" = 1'-0"



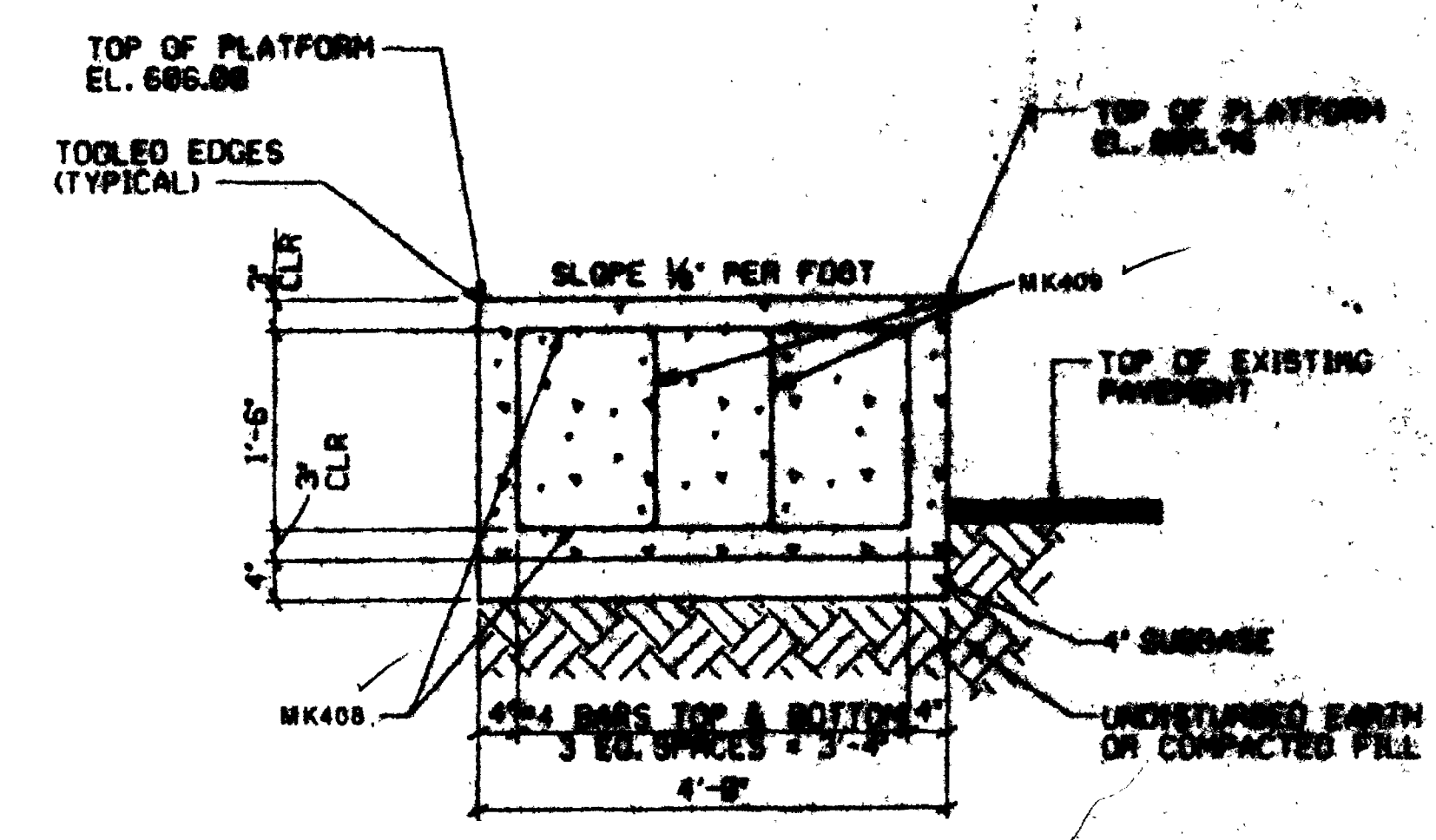
STAIR/LANDING SECTION
SCALE: 1/4" = 1'-0"



AUTOCLOAVE WEST SUPPORT PIER SECTION
SCALE: 1/4" = 1'-0"



AUTOCLOAVE EAST SUPPORT PIER SECTION
SCALE: 1/4" = 1'-0"



STAIR PLATFORM SECTION
SCALE: 1/4" = 1'-0"

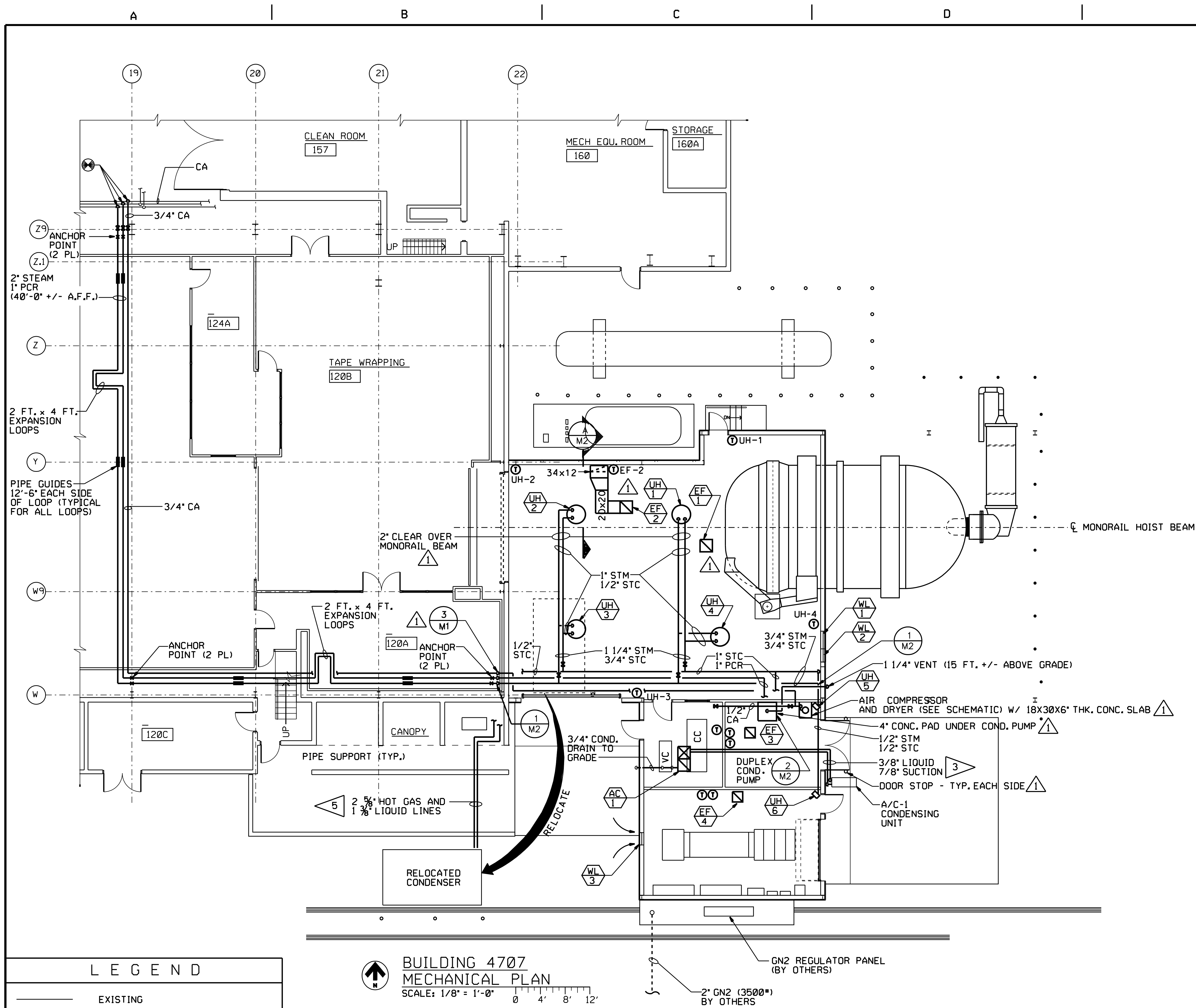
NASA
FACILITIES OFFICE NASA MSFC, AC 35812
APPROVED EXCEPT AS NOTED
Approval does not relieve the Contractor of the responsibility for correct fabrication, correctness of dimensions, adequacy of details and compliance with specifications.

SHERMAN INTERNATIONAL INC.
MANUFACTURER

CADD DWG.	
CHANGES TO THIS DRAWING SHALL BE MADE ON CADD ONLY.	
12865R	03-10-09
03-09-09	LATEST CADD UPDATE:
GAB	BY: G. BATCHELOR 02:00 PM

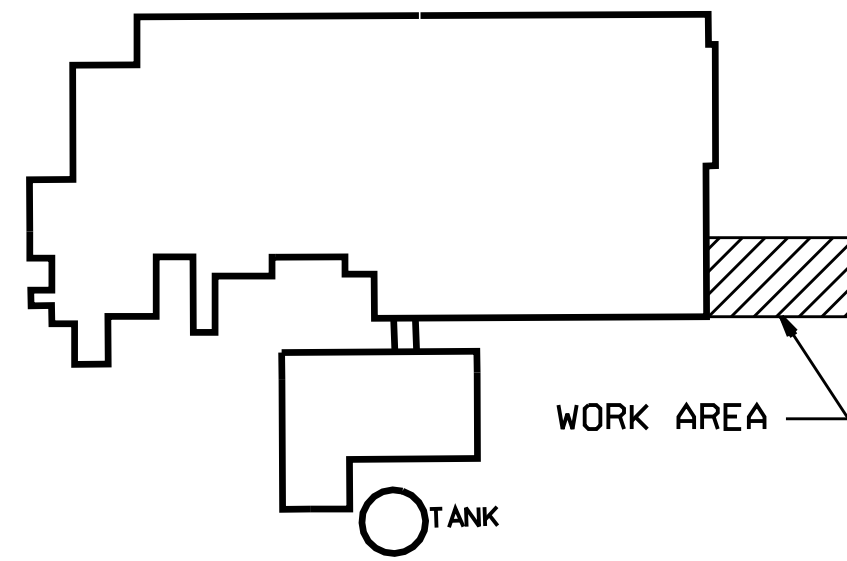
GB	03-09-09	THIS SHEET ADDED PER VENDOR SUBMITTAL			
REV.	BY	DATE	REVISION	CL. NO.	APPROVED
Marshall Space Flight Center Huntsville, Alabama 35812					
BUILDING 4707 INSTALL AUTOCLAVE					
SUPPORT PIER PLAN & SECTIONS, STAIR/LANDING SECT. - VENDOR DWG.					
DRAWING NO.			FAC-F0-4707-S6.1		
SHEET 21 OF 33					

REF. NO. **S6.1**



LEGEND	
	EXISTING
	NEW
	EXHAUST/RETURN
	SUPPLY
	CONNECT TO EXISTING
	THERMOSTAT
	PUMPED CONDENSATE RETURN
	COMPRESSED AIR
	STEAM CONDENSATE
	EXHAUST FAN
	STEAM
	UNIT HEATER
	WALL LOUVER
	GATE VALVE
	UNION
	Y-STRAINER W/BLOWDOWN

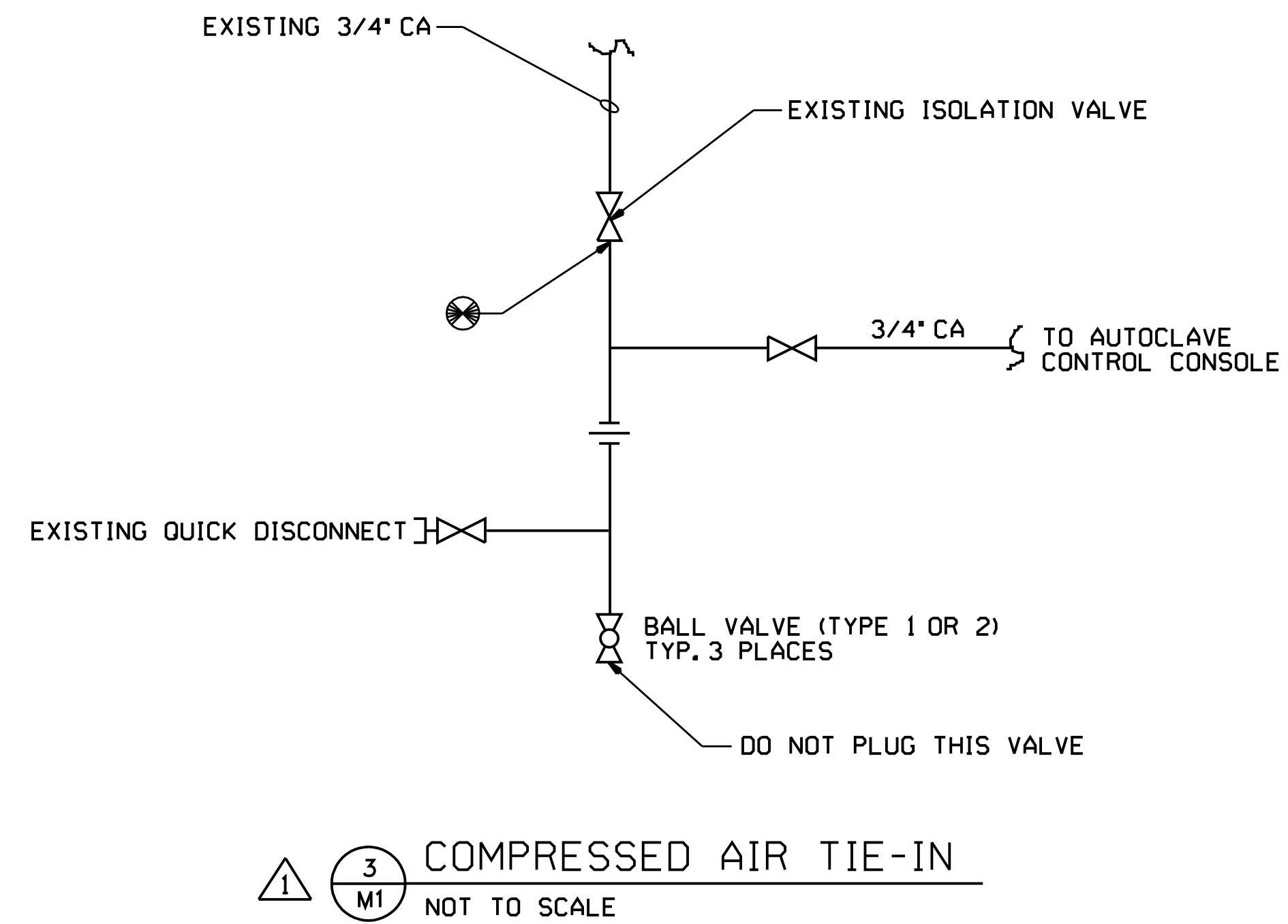
BUILDING 4707
MECHANICAL PLAN
SCALE: 1/8" = 1'-0"



BUILDING 4707
KEY PLAN
N.T.S.

MECHANICAL NOTES

- PIPING MATERIALS SHALL BE AS LISTED BELOW:
 - COMPRESSED AIR UPSTREAM OF FILTER - TYPE BCS PER SPEC SECTION 15060.
 - COMPRESSED AIR DOWNSTREAM OF FILTER- TYPE L COPPER .
 - STEAM AND CONDENSATE - TYPE BCS-125 PER SPEC SECTION 15060.
- MOUNT THERMOSTATS APPROXIMATELY 5 FEET ABOVE FINISHED FLOOR.
- PROVIDE AN INVERTED TRAP AT THE TOP OF THE REFRIGERANT SUCTION RISER PER MANUFACTURER'S RECOMMENDATIONS TO PREVENT OIL MIGRATION TO THE COMPRESSOR DURING OFF CYCLES.
- SEE SHEET M - 3 FOR MECHANICAL EQUIPMENT SPECIFICATIONS .
- SCHEDULE SYSTEM OUTAGE THRU COTR. CLOSE ISOLATION VALVES TO MINIMIZE REFRIGERANT LOSS WHEN CUTTING EXISTING LINES. EXTEND NEW LINES TO RELOCATED CONDENSER. RELOCATE VALVES AND SPECIALTIES FROM REMOVED PIPING INTO NEW LINES. INSTALL, TEST, AND EVACUATE NEW LINES PER SPEC SECTION 15185. RESTORE SYSTEM CHARGE TO PROPER LEVEL PER MANUFACTURER'S INSTRUCTIONS.
- TEST REQUIREMENTS FOR STEAM/CONDENSATE LINE SHALL BE A VISUAL IN SERVICE WALK DOWN . GAUGE REQUIREMENTS WAIVED.
- STAPLES MAY BE USED ON PIPE INSULATION ONLY AS A TEMPORARY FASTENER UNTIL WRAPPED. ALL STAPLES SHALL BE COVERED.
- ESCUTHEONS WILL BE USED ON ALL FINISHED WALL PENETRATIONS.

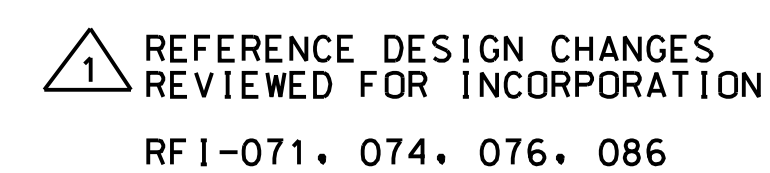
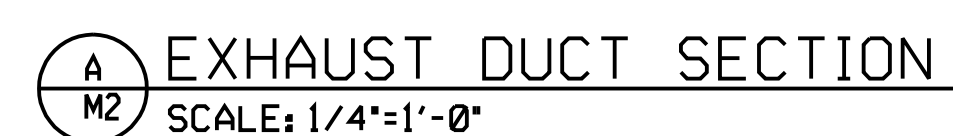
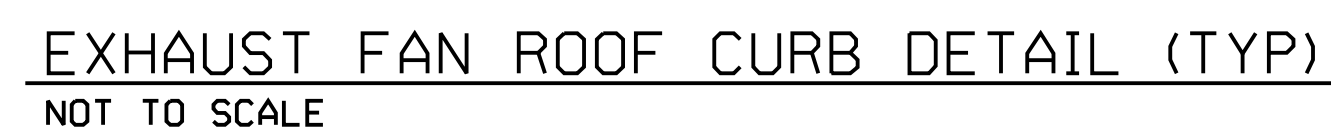


REDUCED SIZE DRAWING		CADD DRAWING	
DO NOT SCALE		CHANGES TO THIS DRAWING SHALL BE MADE ON CADD ONLY.	
12865.R		LATEST CADD UPDATE: 03-10-09	
11-14-96		BY: G. BATCHELOR	
VANN		09:00 AM	

CONCURRENCE:	REV.	BY	DATE	REVISION	C.I. NO.	APPROVED
CONCURRENCE:	/	/	/			
CONCURRENCE:	/	/	/			
CONCURRENCE:	/	/	/			
CONCURRENCE:	JOHN R. NEBRIG		06/23/97	AS-BUILT PER REDLINES	98088	ROP LWG
MAINTENANCE:	J.H. VICK		06/24/97			
USING OFFICE:	M.L. McINTOSH		06/19/97			
ENVIRONMENTAL HEALTH:	DENNIS S. DAVIS		06/19/97			
SAFETY OFFICE:	M.E. MANN		06/18/97			
COMMUNICATIONS OFFICE:						

AE FIRM: AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA		NASA AE CONTRACT NO. NASA 8-40083	
SUBMITTED:	HOWARD BOZEMAN	APPROVAL RECOMMENDED:	R.B. FELDER
AE1 DATE:	01-17-97	AB2 DATE:	06-24-97
DESIGNED:	BDO/SWH	APPROVAL RECOMMENDED:	ARTHUR HARGROVE JR
DRAWN:	FERGUSON/SAMANIEGO	AE1 & ASSOCIATES, INC.	
CHECKED:	S.W. HUNT II	DESIGN DATE:	06-24-97
SCALE:	AS NOTED	SPEC. NO.	M4137

WORK REQUEST NO. 1286-0000-288-5.R	
BUILDING 4707	
INSTALL AUTOCLAVE	
MECHANICAL PLAN	
REF. NO.	M1
OF	3
DWG NO.	FAC-F0-4707-M1
SHEET	22 OF 33



<p>REDUCED SIZE DRAWING</p> <hr/> <p>DO NOT SCALE</p>	<p>CADD DRAWING</p> <hr/> <p>CHANGES TO THIS DRAWING SHALL BE MADE 12865.R ON CADD ONLY. 1-08-97 LATEST CADD UPDATE: 03-10-09 VANN BY: G. BATCHELOR 09:00 AM</p>
--	---

CONCURRENCE:									
CONCURRENCE:	/	/	/	/	/	/	/	/	/
CONCURRENCE:	/	/	/	/	/	/	/	/	/
CONCURRENCE:	/	/	/	/	/	/	/	/	/
CONCURRENCE: JOHN R. NEBRIG	REV.	BY	DATE	AS-BUILT PER REDLINES			98088	RDP	LT
MAINTENANCE /06 /23 /97 /				REVISION			C.I. NO.	APPROVED	
CONCURRENCE: J.H. VICK									
USING OFFICE /06 /24 /97 /	Marshall Space Flight Center Huntsville, Alabama 35812								
CONCURRENCE: M.L. MCINTOSH	WORK REQUEST NO. 1286-0000-288-5.R								
ENVIRONMENTAL HEALTH /06 /19 /97 /	BUILDING 4707 INSTALL AUTOCLAVE								
CONCURRENCE: DENNIS S. DAVIS	MECHANICAL DETAILS AND SCHEMATICS								
SAFETY OFFICE /06 /19 /97 /	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>AE FIRM: AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA</p> <p>SUBMITTED: HOWARD BOZEMAN</p> <p>AE1 DATE1: 01-17-97</p> <p>DESIGNED: BDD/SWH</p> <p>DRAWN: FERGUSON/SAMANIEGO</p> <p>CHECKED: S.W. HUNT II</p> <p>SCALE1: AS NOTED</p> </div> <div style="width: 30%;"> <p>APPROVAL, RECOMMENDED: R.B. FELDER</p> <p>APPROVAL, RECOMMENDED: ARTHUR HARGROVE JR</p> <p>DESIGN DATE: 06-24-97</p> <p>SPEC. NO.: M4137</p> </div> <div style="width: 30%;"> <p>NASA AE CONTRACT NO. NASA 8-40083</p> <p>ACCEPTED FOR CONSTRUCTION: J. CLARK BOAZ</p> <p>AE41 DATE1: 06-25-97</p> <p>DWG NO. FAC-FO-4707-M2</p> <p>SHEET 23 OF 3</p> </div> </div>								
CONCURRENCE: M.E. MANN									
COMMUNICATIONS OFFICE /06 /18 /97 /									
TELECOMMUNICATIONS EQUIPMENT AFFECTED BY THIS CONTRACT WORK IS NOT TO BE ALTERED OR REMOVED BY THE CONTRACTOR, CONTACT THE COTR IN THE EVENT OF A CONFLICT.									
REF. NO.	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>M2</p> <p>OF 3</p> </div> <div style="width: 30%;"></div> <div style="width: 30%;"></div> </div>								

UNIT HEATER SCHEDULE															
UNIT										STEAM		EQUAL TO			
MARK	LOCATION	AIR FLOW RATE (CFM)	CAPACITY (BTUH)	MOTOR (HP)	VOLTS	PHASE	DISCHARGE	MOUNTING HT.	THROW	SPREAD	PRESSURE (PSIG)	TRAP CAPACITY	MAKE	MODEL	NOTES
UH-1-4	HIGH BAY	2860	114,000	1/6	120	1	VERTICAL	27 FT. +/-	-	20 FT.	15	360 PPH	MODINE	V-139L	① ② ③
UH-5 & 6	EQUIP. RMS.	370	28,000	1/25	120	1	HORIZONTAL	8 FT. +/-	15 FT.	-	15	90 PPH	MODINE	HS-24	①

NOTES: (1) PROVIDED WITH LINE VOLTAGE THERMOSTAT AND MOTOR STARTER.

② LOW OUTLET TEMPERATURE MODEL.

③ PROVIDE CONE-JET DISCHARGE DEFLECTOR.

EXHAUST FAN SCHEDULE												
UNIT			FAN DATA						ELECTRIC DATA	EQUAL TO		NOTES
MARK	LOCATION	TYPE	AIR FLOW (CFM)	TOTAL SP (IN. W.G.)	RPM	BHP MAX.	MOTOR (HP)	DRIVE TYPE	VOLTS/PHASE	MAKE	MODEL	
EF-1	HIGH BAY	CENT.	2400	.250	1140	0.52	0.50	DIRECT	120/1	PENN	BT53	3.6,9,11,14
EF-2	HIGH BAY	CENT.	3800	.375	1025	0.80	1.00	BELT	208/3	PENN	DX16B	6.7,9,11,12,14
EF-3 & 4	EQUIP. RMS.	CENT.	1150	.250	1750	0.16	0.25	DIRECT	120/1	PENN	A010	6.9,11,12,14

NOTES:

- | | |
|--|-------------------|
| 1. EXPLOSION PROOF TO AIRSTREAM | 8. BIRD SCREEN |
| 2. SPARK PROOF TO AIR STREAM | 9. DISCONNECT |
| 3. ON-OFF BY WALL SWITCH WITH PILOT LIGHT | 10. INLET SCREEN |
| 4. ON-OFF BY ONE WALL SWITCH W/PILOT LIGHT FOR BOTH FANS | 11. ROOF CURB |
| 5. INTERLOCK ON-OFF WITH LIGHT SWITCH | 12. THERMOSTAT |
| 6. BACKDRAFT DAMPER | 13. 2 SPEED MOTOR |
| 7. BELT GUARD | 14. MOTOR STARTER |

CONDENSATE PUMP SCHEDULE												
UNIT			PUMP DATA			ELECTRIC DATA				EQUAL TO		NOTES
MARK	LOCATION	TYPE	FLOW RATE (gpm)	PRESSURE (PSI)	RECEIVER SIZE (GAL.)	RPM	MOTOR HP	VOLT	PHASE	MAKE	MODEL	
CP-1	EQUIP. RM.	DUPLEX	6	40	21	3500	1	230	3	SP1RAX/SARCO	VCS-44	1

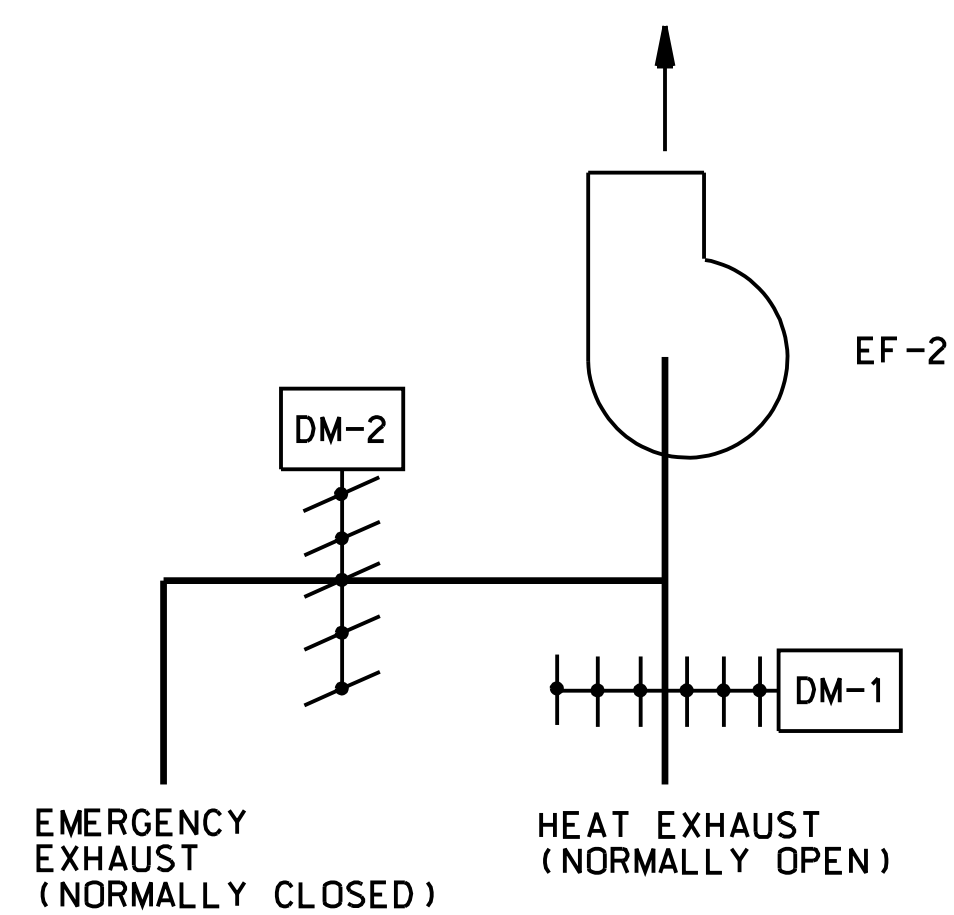
NOTES: 1. PROVIDED WITH ALTERNATOR, CONTROL PANEL, DISCONNECT, STARTERS, FLOAT SWITCHES, SIGHT GLASS AND DISCHARGE PRESSURE GAUGES, CHECK VALVES AND GATE VALVES.

WALL LOUVER SCHEDULE							
MARK	LOCATION	TYPE	FACE SIZE INCHES	FREE AREA SF	CFM	SPD IN. WG	NOTES
WL-1	HIGH-BAY	AJUSTABLE	24W X 36H	2.45	2400	.125	①②③
WL-2	HIGH-BAY	AJUSTABLE	36W X 36H	3.90	3800	.125	①②③
WL-3	ELECT. ROOM	AJUSTABLE	24W X 24H	1.52	1200	.085	①②③

NOTES: (1) 120 VOLT, 2-POSITION, SPRING RETURN MOTOR

② INTERIOR BIRD SCREEN

③ LOUVERS & DAMPERS AIEL-4-164 OR EQUAL



NORMAL OPERATION

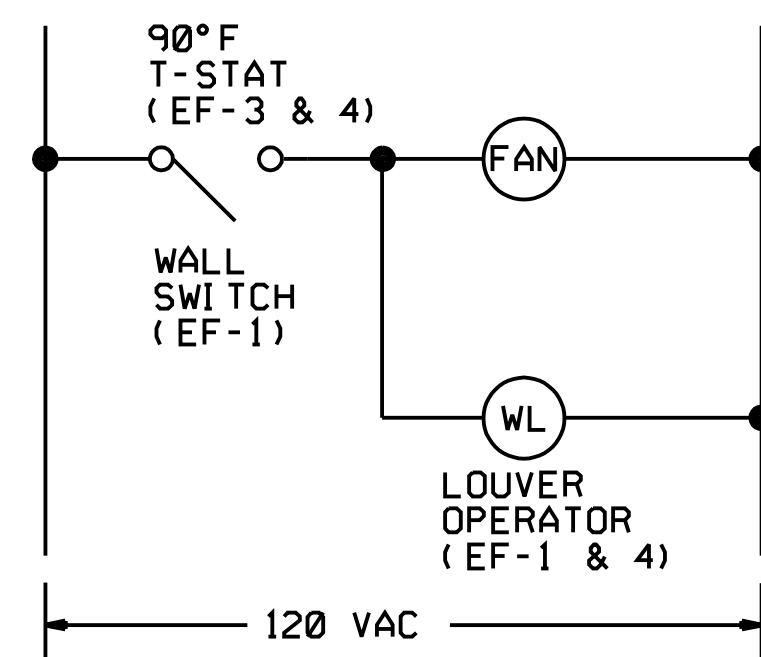
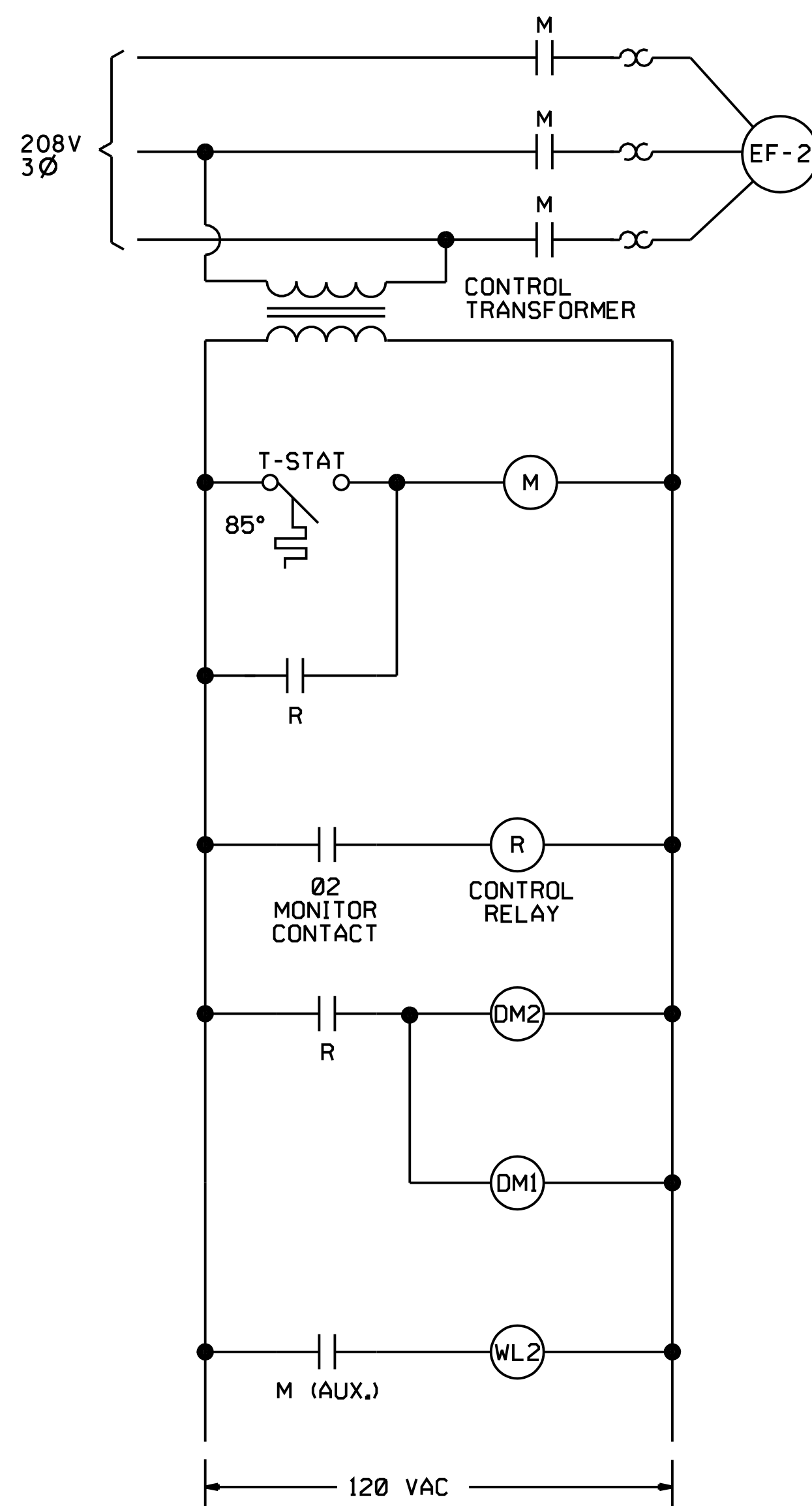
THERMOSTAT STARTS EF2 TO EXHAUST
 HEAT WHEN TEMPERATURE RISES TO
 85° F. LOUVER WL-2 IS INTERLOCKED
 TO OPEN WHEN FAN RUNS.

EMERGENCY OPERATION

UPON DETECTION OF OXYGEN DEFICIENCY,
O2 MONITOR STARTS EF-2. INTERLOCK
OPENS WL-2 FOR FRESH AIR INTAKE.
DAMPER MOTORS DM-1 AND DM-2
OPERATE DAMPERS TO EXHAUST AIR
FROM FLOOR LEVEL TO REMOVE NITROGEN.

CONTROLS FOR EXHAUST FAN EF-2

NOT TO SCALE



TYPICAL CONTROLS EF-1,3, AND 4
NOT TO SCALE

MECHANICAL EQUIPMENT SPECIFICATIONS

CONTROL ROOM A/C UNIT (A/C-11): NOMINAL 3-TON AIR-COOLED SPLIT SYSTEM;
CEILING MOUNTED, NON-DUCTED EVAPORATOR UNIT WITH AIR DISTRIBUTION PLENUM
AND GRILLES; DX COOLING COIL, AND FINNED TUBE ELECTRIC HEATING COIL;
CONDENSING UNIT WITH 1/2" COPPER COMPRESSOR, 1/2" THERMIST, AND
SIGHT GLASS; MICROPROCESSOR BASED CONTROLS WITH WALL MOUNTED
TEMPERATURE SENSOR; 1250 CFM SUPPLY AIR; 26,900 BTUH SENSIBLE/32,100 BTUH
TOTAL COOLING AT 75 DEGREES F AND 50 PERCENT; 6.5 KW HEAT; 208 VAC/1/60
TEMPERATURE UNIT; 208 VAC/3/60 CONDENSING UNIT; 1 EBERHART MINI-MATE PLUS MODEL
NME036 EVAPORATOR UNIT WITH MODEL DMC037A CONDENSING UNIT OR
APPROVED EQUAL.

COMPRESSED AIR SYSTEM COMPONENTS

COMPRESSED AIR SYSTEM COMPONENTS SHALL BE AS SPECIFIED BELOW AND IN SPEC SECTION 15211.

AIR COMPRESSOR: SINGLE STAGE, 3 H.P., 30 GALLON HORIZONTAL RECEIVER, 7.9 SCFM AT 100 PSI, 208 VAC/3 PHASE/ 60 HZ; DAYTON (W.W. GRAINGER) NO. 7Z542 OR APPROVED EQUAL.

AUTOMATIC DRAIN VALVE: FLOAT OPERATED, CAST IRON BODY WITH STAINLESS STEEL INTERNALS, 150 PSIG OPERATING PRESSURE; ITT HOFFMAN MODEL 793 OR APPROVED EQUAL.

COMPRESSED AIR FILTER: GENERAL PURPOSE, 50 MICRON FILTER ELEMENT, NPT PORTS, METAL BOWL WITH SIGHT GLASS, AUTOMATIC DRAIN, SERVICE LIFE INDICATOR, WALL MOUNTING BRACKET AND HARDWARE, 10 SCFM CAPACITY AT .5 PSID; NORGREN MODEL F08-401-A3DA OR APPROVED EQUAL. PROVIDE 3 SPARE FILTER ELEMENTS.

OIL REMOVAL FILTER: COALESCING TYPE, CAPABLE OF PROVIDING LEAVING AIR OIL CONTENT OF .01 PPM WITH 8 PPM ENTERING AIR; NPT PORTS, METAL BOWL WITH SIGHT GLASS, AUTOMATIC DRAIN, SERVICE LIFE INDICATOR, WALL MOUNTING BRACKET AND HARDWARE, 10 SCFM CAPACITY AT 1 PSID; NORGREN MODEL F45-401-AODA OR APPROVED EQUAL.

REFRIGERATED AIR DRYER: COMBINATION AFTERCOOLER/DRYER/REHEATER, AIR COOLED, MINIMUM CAPACITY OF 10 SCFM AT 100 PSI/190 DEGREES F INLET, 100 DEGREES F AMBIENT, 150 DEGREES F OUTLET, 35 DEGREES F PRESSURE DEWPOINT, AND 2 PSI PRESSURE DROP; AUTOMATIC MOISTURE DRAIN, 115 VAC/1/60; PIONEER AIR SYSTEMS MODEL AD15RA OR APPROVED EQUAL.

AIR PRESSURE REGULATOR: GENERAL PURPOSE RELIEVING TYPE. NPT PORTS. WALL MOUNTING BRACKET AND HARDWARE, OUTLET PRESSURE GAGE, 50-125 PSI OUTLET PRESSURE RANGE, MINIMUM 10 SCFM CAPACITY AT 100 PSI INLET AND 90 PSI OUTLET; NORGREN MODEL 11-002-169 OR APPROVED EQUAL.

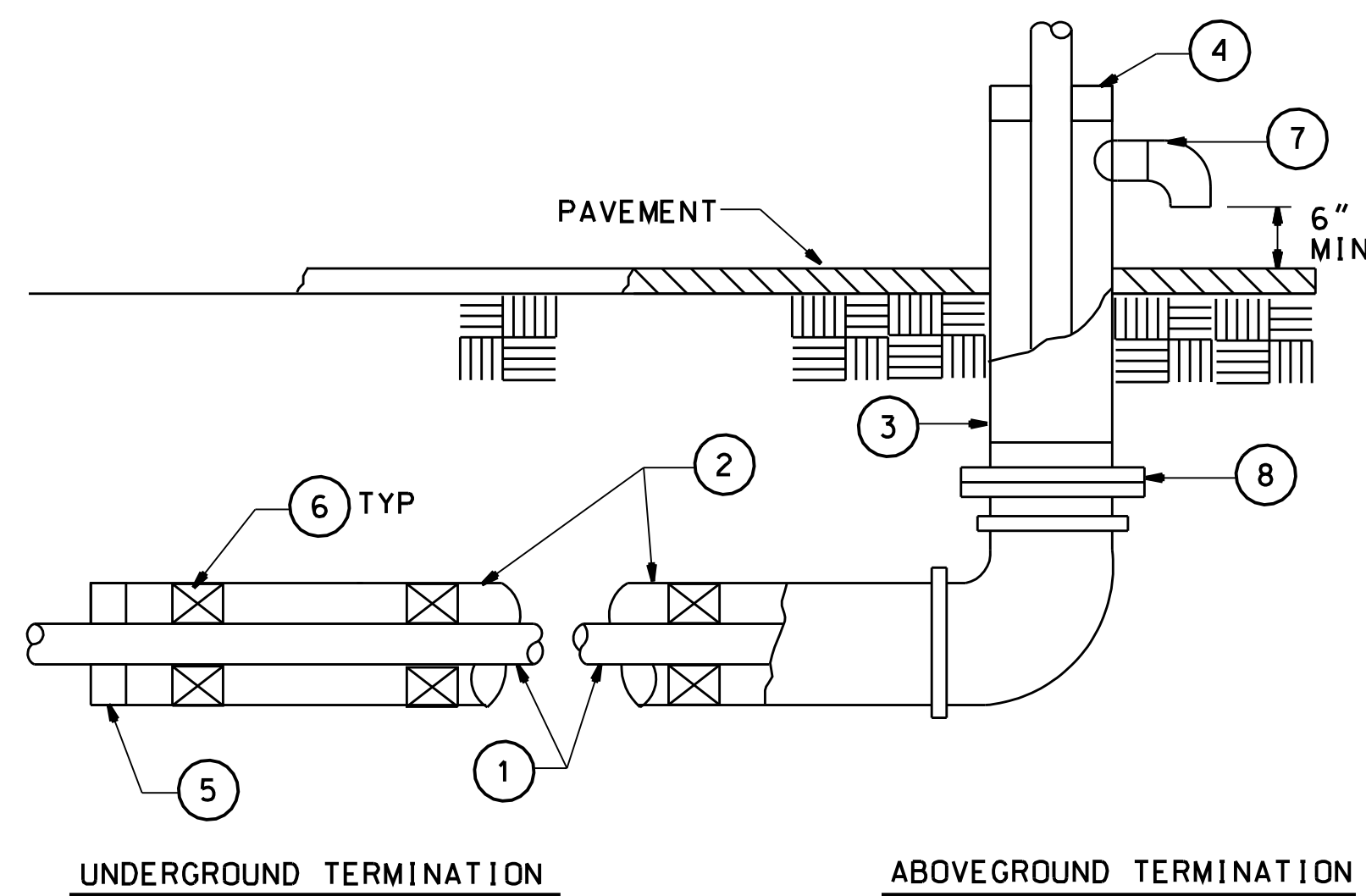
RELIEF VALVE: POPPET TYPE, BRASS BODY WITH STAINLESS STEEL INTERNALS.
MINIMUM RELIEF CAPACITY OF 10 SCFM AT 100 PSIG SET PRESSURE. FACTORY SET:
NORGREN MODEL 16-005-011 OR APPROVED EQUAL.

<h2 style="margin: 0;">CADD DRAWING</h2>	
CHANGES TO THIS DRAWING SHALL BE MADE 12865.R ON CADD ONLY.	
1-09-97	LATEST CADD UPDATE: 03-10-09 VANN BY: G. BATCHELOR 09:00 AM

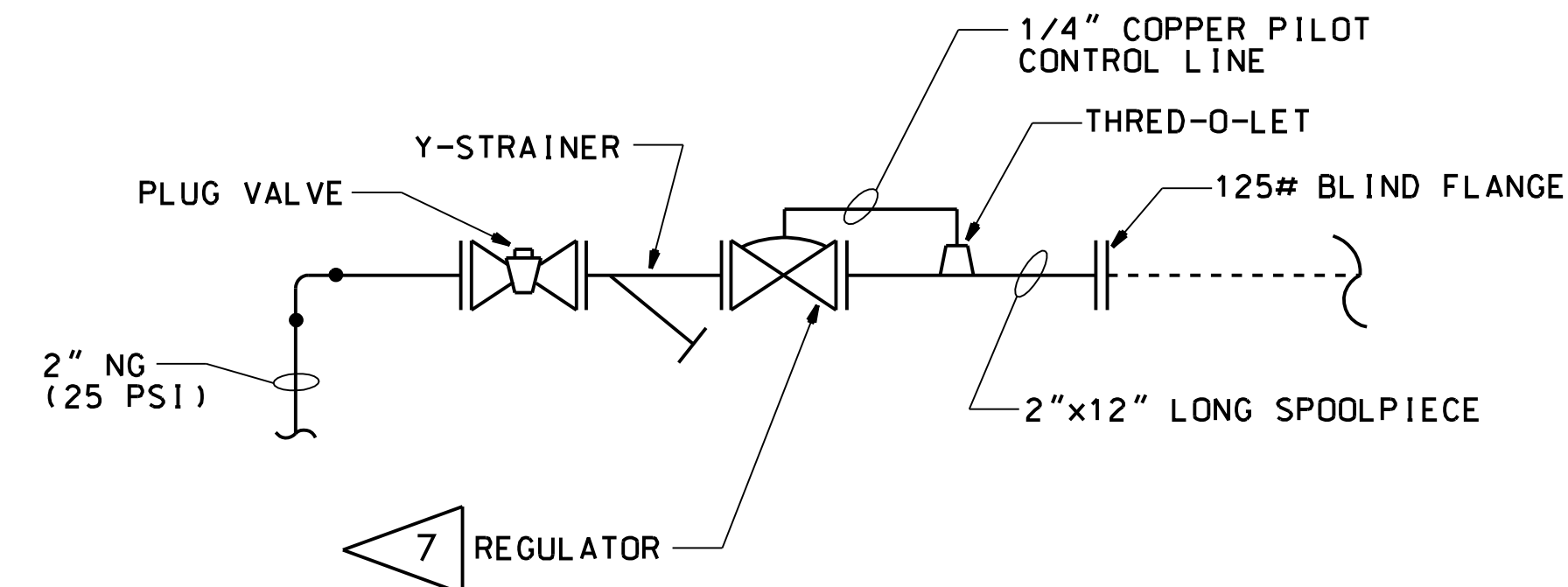
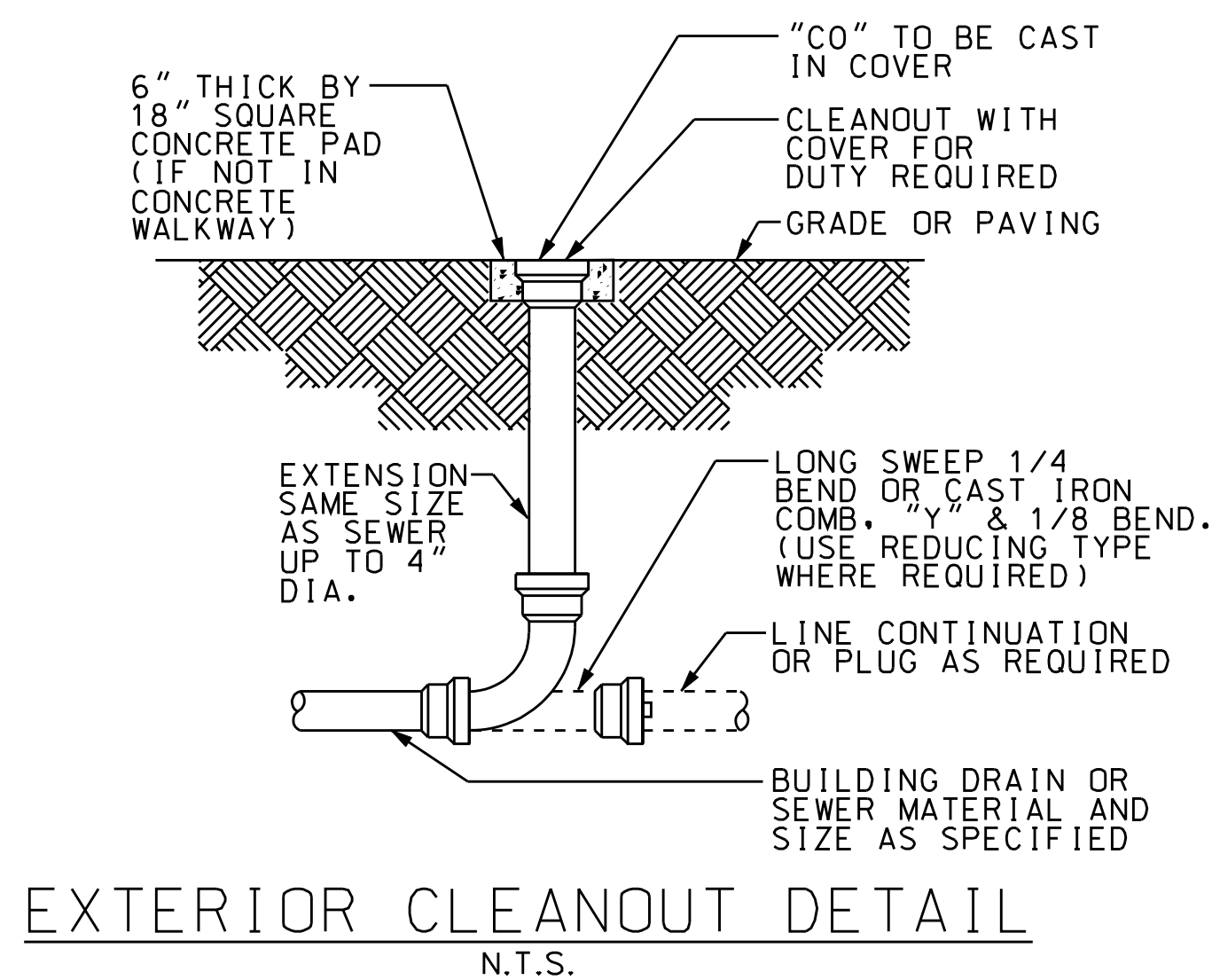
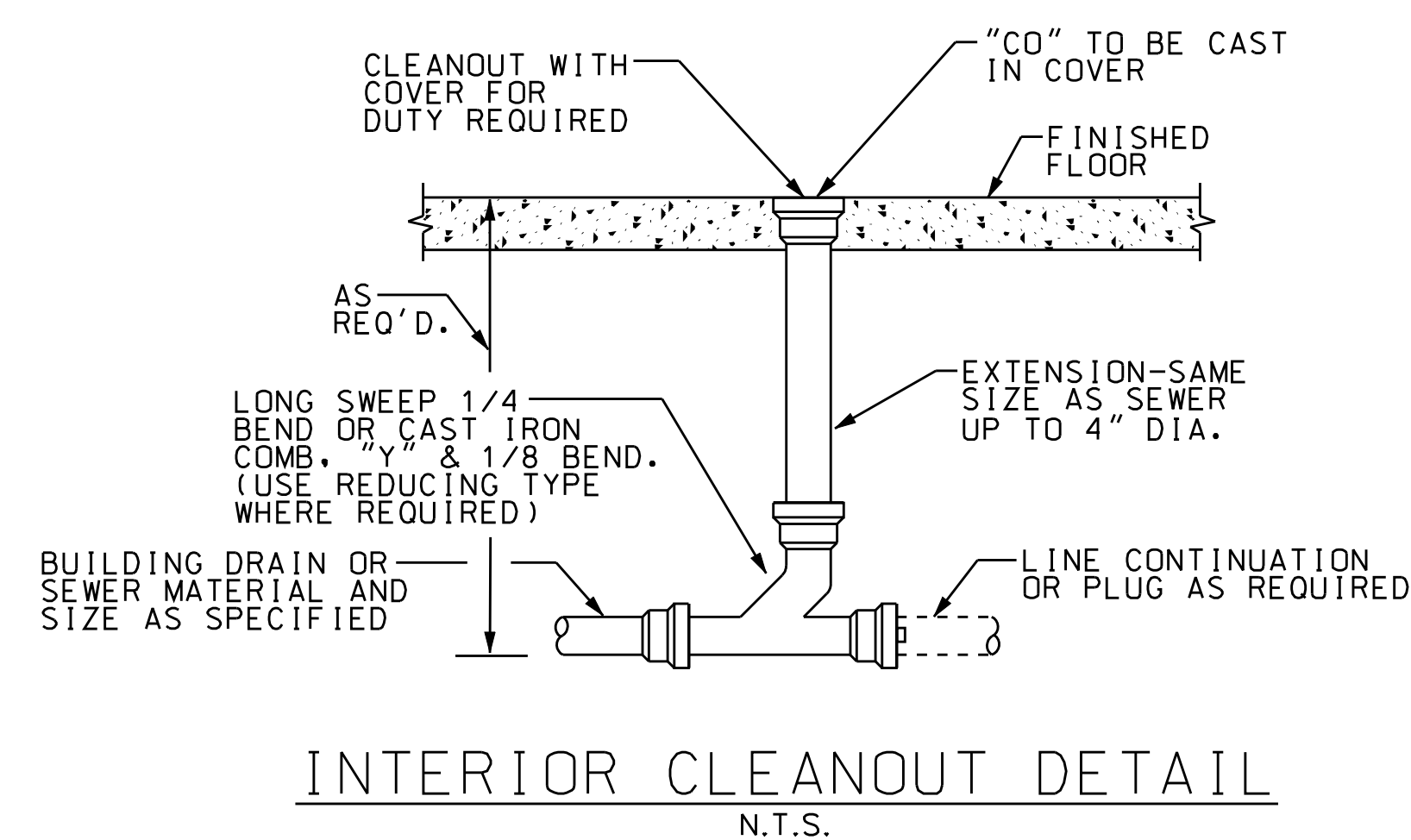
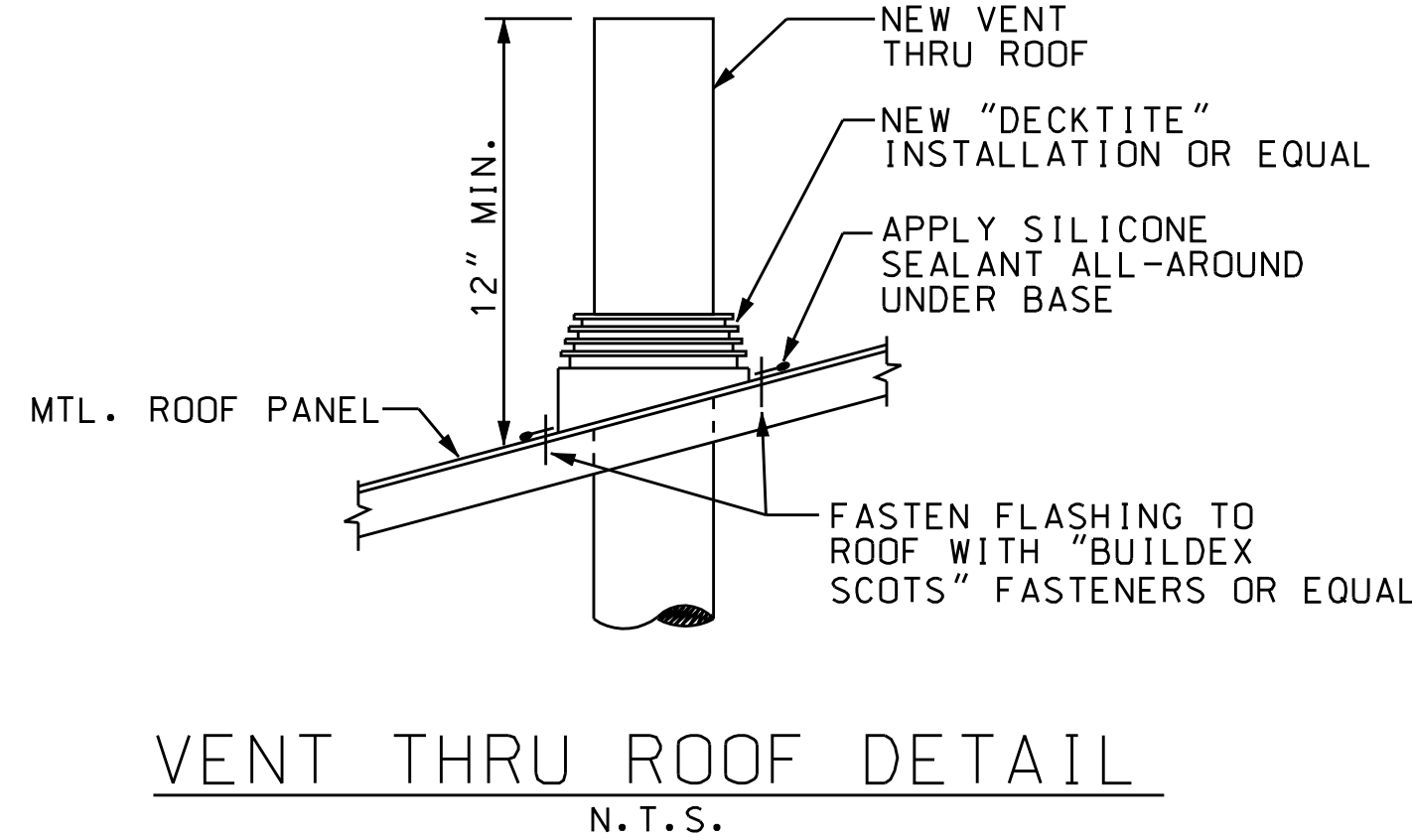
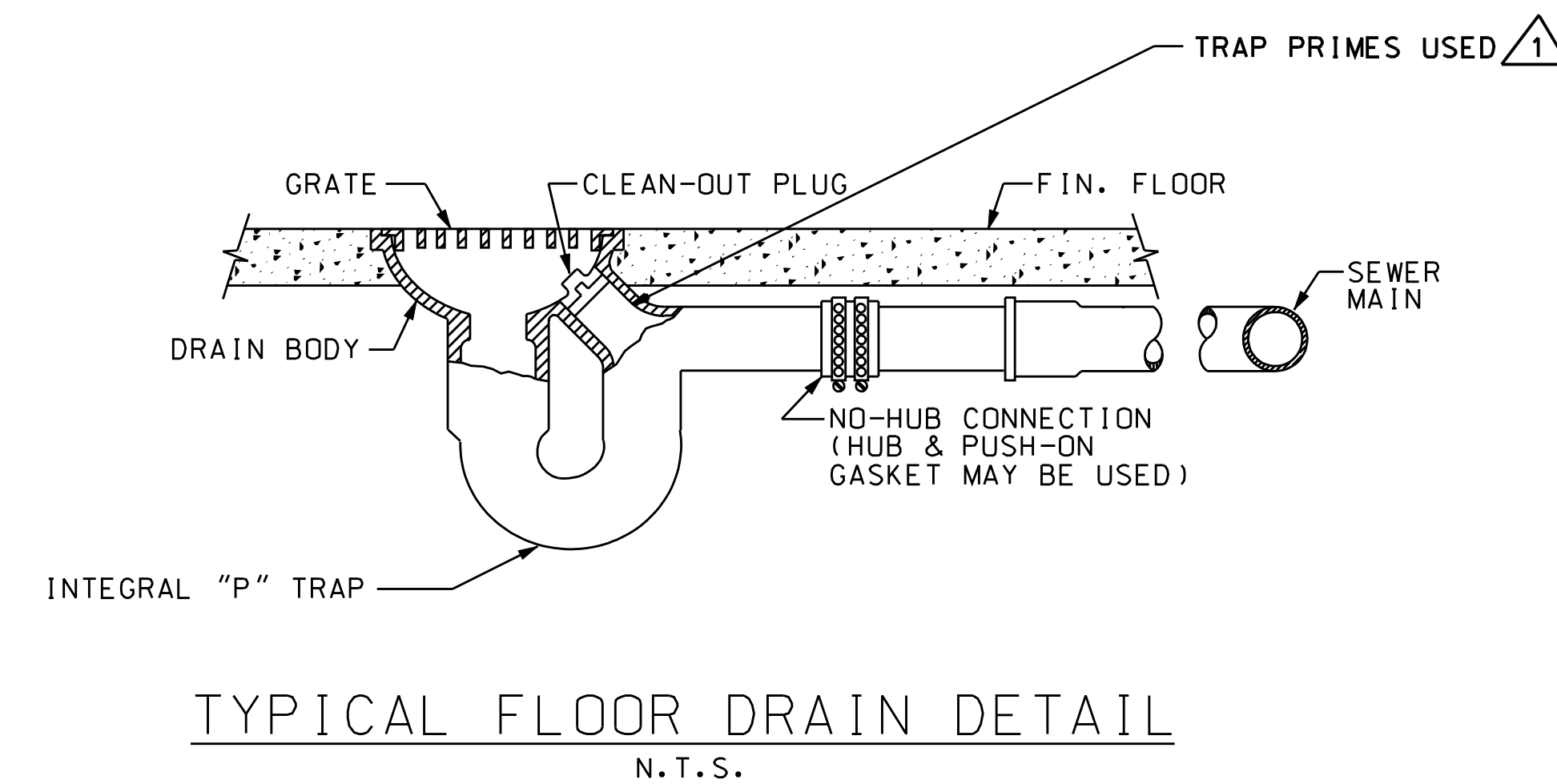
[illegible]

DETAIL NOTES

- 1 CARRIER PIPE - SIZE AND MATERIAL AS INDICATED
- 2 CONDUIT (SLEEVE) - SCHEDULE 80 PVC WITH SOLVENT WELDED FITTINGS. 10" NPS SLEEVE FOR 4" NPS CARRIER PIPE. 8" NPS FOR 2" NPS CARRIER PIPE.
- 3 CONDUIT RISER - SCHEDULE 40 CARBON STEEL. COAT BELOW GRADE WITH BITUMINOUS COATING PER SPEC SECTION 15060. PRIME AND PAINT GRAY ABOVE GRADE.
- 4 WATERPROOF END SEAL - RUBBER COMPRESSION TYPE: "LINK-SEAL", METRAFLEX "METRASEAL", OR APPROVED EQUAL.
- 5 WATERPROOF END SEAL - SAME AS ABOVE, OR 12" DEPTH OF POLYURETHANE FOAM.
- 6 CARRIER PIPE SUPPORT - P.T. WOOD OR OTHER NON-METALLIC CENTERING RING; SPACING PER SPECS. ATTACH TO PIPE PRIOR TO INSTALLING SLEEVE. SUPPORT SHALL HAVE PROVISION FOR GAS LEAKAGE TO PASS TO VENT.
- 7 VENT - MIN. ONE PIPE SIZE LARGER THAN CARRIER PIPE; WITH INSECT SCREENED OUTLET.
- 8 150# GASKETED FLANGES.



1 SLEEVING DETAIL FOR NG AND GN2 PIPING IN PAVED AREAS
P2 NOT TO SCALE



2 NATURAL GAS SUPPLY TERMINATION
P2 NOT TO SCALE

CADD DRAWING			
CHANGES TO THIS DRAWING SHALL BE MADE ON CADD ONLY.			
12865.R	1-09-97	03-10-09	09:00 AM
VANN	BY: G. BATCHELOR		

CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											
CONCURRENCE:											
/ / / /											



A schematic diagram of a building layout. It features a large, irregularly shaped building footprint. A specific section of this footprint is shaded with diagonal hatching and labeled 'WORK AREA' with a leader line. Below the main building footprint, there is a smaller, rectangular structure labeled 'TANK' with a leader line.

 BUILDING 4707
KEY PLAN
N.T.S

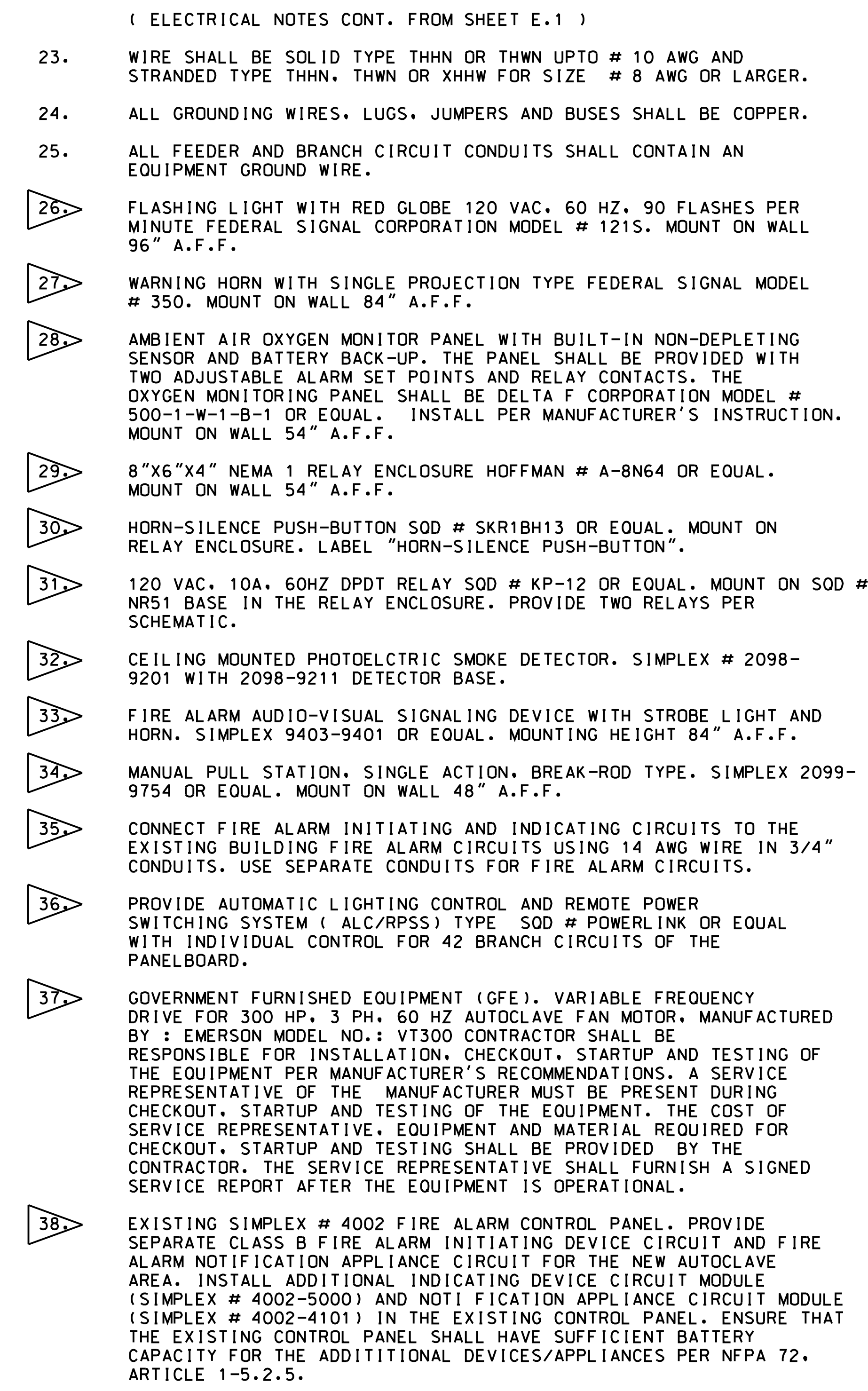
- ELECTRICAL NOTES :
1. ALL ELECTRICAL WORKS SHALL CONFORM TO 1996 NATIONAL ELECTRICAL CODE (NEC) AS A MINIMUM STANDARD. ITEMS SPECIFIED BY BRAND NAME OR CATALOG NUMBER ARE ON AN "OR APPROVED EQUAL" BASIS.
 2. USE EXISTING 800A SPARE BREAKER AT COMPARTMENT "A8" TO PROVIDE POWER SUPPLY TO AUTOCLAVE MCC.
 3. PROVIDE CONDUIT PENETRATION THROUGH THE ROOF AS PER DETAIL 7, SHEET A4.
 4. RELOCATE THE EXISTING 30A, 3POLE DISCONNECT SWITCH FOR THE EXISTING CONDENSER UNIT FROM THE EXISTING LOCATION TO THE NEW LOCATION AS SHOWN. REROUTE THE EXISTING CONDUIT AS NECESSARY. MOUNT RELOCATED DISCONNECT SWITCH AT 36" ABOVE GRADE.
 5. MOTOR CONTROL CENTER (MCC) SHALL BE MOUNTED AGAINST THE WALL IN THE ELECTRICAL ROOM. STARTER SIZES SHALL BE AS SHOWN IN THE ONE LINE DIAGRAM. PROVIDE THERMAL OVERLOAD RELAY, BIMETALLIC NON-COMPENSATING HAND RESET TYPE. TRIP CURRENT OF THERMAL UNIT SHALL BE SELECTED BASED ON MOTOR NAMEPLATE READING. SEE SHEET E-5 FOR DETAIL.
 6. PROVIDE MOLDED CASE MOTOR CIRCUIT PROTECTORS FOR ALL MOTOR FEEDERS. PROVIDE AUXILIARY CONTACTS FOR ALL MOTOR FEEDERS AS SHOWN IN SHEET E-5. ALL MOTOR DISCONNECTS SHALL BE LOCKABLE AT "OFF" POSITION.
 7. PROVIDE MOLDED CASE THERMAL MAGNETIC CIRCUIT BREAKERS FOR ALL TRANSFORMER FEEDERS.
 8. PROVIDE KEY-OPERATED, 3-POSITION (MAINTAINED), SELECTOR SWITCH SOD # ZAZBGO OR EQUAL. MOUNT ON MCC COMPARTMENT DOOR.
 9. PROVIDE 480V-120V, CONTROL POWER TRANSFORMER WITH VA RATING ADEQUATE TO HANDLE STARTER COIL CURRENT AND THREE PILOT LIGHTS.
 10. PROVIDE INDUSTRIAL TYPE CONTROL RELAY, TYPE SOD # 8501X020V02 OR EQUAL.
 11. PROVIDE INDUSTRIAL TYPE PUSH-BUTTON, TYPE SOD # KR1BH13 OR EQUAL. MOUNT ON MCC COMPARTMENT DOOR.
 12. LOCATIONS OF MOTORS, EXHAUST FANS, UNIT HEATERS, AC UNITS, CONDENSER AS SHOWN ON ELECTRICAL POWER PLAN ARE APPROXIMATE. FOR EXACT LOCATIONS, SEE MECHANICAL OR ARCHITECTURAL DRAWINGS.
 13. MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS NOTED OTHERWISE.
 14. PROVIDE RIGID STEEL CONDUITS FOR ALL OUTDOOR LOCATIONS AND INDOOR EXPOSED LOCATIONS SUBJECT TO DAMAGE.
 15. COAT RIGID STEEL CONDUIT IN DIRECT CONTACT WITH EARTH WITH PVC OR APPROVED ASPHALT COMPOUND.
 16. ELECTRICAL RACEWAY CONNECTIONS TO VIBRATING EQUIPMENT OR MACHINERY SUCH AS TRANSFORMERS, ETC., SHALL BE WITH LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT NOT TO EXCEED 3'-0".
 17. INSTALLED EXPOSED CONDUIT GROUPED TOGETHER INsofar AS POSSIBLE. INSTALL ALL CONDUITS PARALLEL OR PERPENDICULAR TO BUILDING SURFACES. MOUNT ON CHANNEL STURT SUPPORTS.
 18. ALL CONDUITS SHALL BE RIGIDLY SUPPORTED TO BUILDING STRUCTURE.
 19. ALL CONDUITS SHALL BE EXPOSED EXCEPT IN THE AUTOCLAVE CONTROL ROOM.
 20. ALL CONDUITS INSIDE THE AUTOCLAVE CONTROL ROOM SHALL BE CONCEALED. OUTLET AND SWITCH BOXES IN THE AUTOCLAVE CONTROL ROOM SHALL BE MOUNTED FLUSHED TO THE WALL.
 21. ALL WIRE SIZES SHALL BE COPPER WITH INSULATION RATED 600 VOLT MINIMUM, UNLESS NOTED OTHERWISE.
 22. MINIMUM WIRE SIZES SHALL BE # 12 AWG FOR POWER WIRING , # 14 AWG FOR CONTROL WIRING AND AS SPECIFICALLY NOTED FOR OTHER SYSTEM WIRING.

(ELECTRICAL NOTES CONT. ON SHEET E.2)

<h1 style="margin: 0;">REDUCED SIZE DRAWING</h1> <hr/> <h1 style="margin: 0;">DO NOT SCALE</h1>	<h1 style="margin: 0;">CADD DRAWING</h1> <hr/> <p style="font-size: small;">CHANGES TO THIS DRAWING SHALL BE MADE 1286,5R ON CADD ONLY. 12-04-96 LATEST CADD UPDATE: 03-10-09 GLR BY: G.BATCHELOR 9:00 AM</p>																						
<p>CURRENCEY: / / / /</p> <p>CURRENCEY: / / / /</p> <p>CURRENCEY: / / / /</p> <p>CURRENCEY: JOHN R. NEBRIG</p> <p>MAINTENANCE /06 /23 /97 /</p> <p>CURRENCEY: J.H. VICK</p> <p>USING OFFICE /06 /24 /97 /</p> <p>CURRENCEY: M.L. McINTOSH</p> <p>ENVIRONMENTAL HEALTH /06 /19 /97 /</p> <p>CURRENCEY: DENNIS S. DAVIS</p> <p>SAFETY OFFICE /06 /19 /97 /</p> <p>CURRENCEY: M.E. MANN</p> <p>COMMUNICATIONS OFFICE /06 /18 /97 /</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>REV.</th> <th>BY</th> <th>DATE</th> <th>AS-BUILT PER REDLINES</th> <th>REVISION</th> <th>CL. NO.</th> <th>RDP</th> <th>LWG</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> <div style="text-align: center; font-weight: bold; font-size: large;">NASA</div> <div style="text-align: right; font-weight: bold; font-size: x-large;">Marshall Space Flight Center Huntsville, Alabama 35812</div> <div style="text-align: center; font-weight: bold; margin-top: 10px;">WORK REQUEST NO. 12865.R</div> <div style="text-align: center; font-weight: bold; font-size: x-large; margin-top: 20px;">BUILDING 4707</div> <div style="text-align: center; font-weight: bold; font-size: x-large; margin-top: 10px;"><u>INSTALL AUTOCLAVE</u></div> <div style="text-align: center; font-weight: bold; margin-top: 10px;">ELECTRICAL SITE PLAN</div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 33%;"> AE FIRM: SUBMITTED: HOWARD BOZEMAN </td> <td style="width: 33%;"> AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA APPROVAL RECOMMENDED: R.B. FELDER </td> <td style="width: 33%;"> NASA AE CONTRACT NO. NASA 8-40083 ACCEPTED FOR CONSTRUCTION: J. CLARK BOAZ </td> </tr> <tr> <td> AEX DATE: 01-17-97 DESIGNED M. DEY DRAWN G. ROGERS CHECKED J.B. RHODAS SCALE: AS NOTED </td> <td> AB21 DATE: 06-24-97 APPROVAL RECOMMENDED: ARTHUR HARGROVE JR AJT & ASSOCIATES, INC. DESIGN DATE: 06-24-97 SPEC. NO. BMMS-3 </td> <td> AB41 DATE: 07-25-97 DWG NO. FAC-FQ-4707-E1 SHEET 27 OF 32 </td> </tr> </table>	REV.	BY	DATE	AS-BUILT PER REDLINES	REVISION	CL. NO.	RDP	LWG									AE FIRM: SUBMITTED: HOWARD BOZEMAN	AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA APPROVAL RECOMMENDED: R.B. FELDER	NASA AE CONTRACT NO. NASA 8-40083 ACCEPTED FOR CONSTRUCTION: J. CLARK BOAZ	AEX DATE: 01-17-97 DESIGNED M. DEY DRAWN G. ROGERS CHECKED J.B. RHODAS SCALE: AS NOTED	AB21 DATE: 06-24-97 APPROVAL RECOMMENDED: ARTHUR HARGROVE JR AJT & ASSOCIATES, INC. DESIGN DATE: 06-24-97 SPEC. NO. BMMS-3	AB41 DATE: 07-25-97 DWG NO. FAC-FQ-4707-E1 SHEET 27 OF 32
REV.	BY	DATE	AS-BUILT PER REDLINES	REVISION	CL. NO.	RDP	LWG																
AE FIRM: SUBMITTED: HOWARD BOZEMAN	AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA APPROVAL RECOMMENDED: R.B. FELDER	NASA AE CONTRACT NO. NASA 8-40083 ACCEPTED FOR CONSTRUCTION: J. CLARK BOAZ																					
AEX DATE: 01-17-97 DESIGNED M. DEY DRAWN G. ROGERS CHECKED J.B. RHODAS SCALE: AS NOTED	AB21 DATE: 06-24-97 APPROVAL RECOMMENDED: ARTHUR HARGROVE JR AJT & ASSOCIATES, INC. DESIGN DATE: 06-24-97 SPEC. NO. BMMS-3	AB41 DATE: 07-25-97 DWG NO. FAC-FQ-4707-E1 SHEET 27 OF 32																					

E1

OF 7



<p>REDUCED SIZE DRAWING</p> <hr/> <p>DO NOT SCALE</p>	<p>CADD DWG.</p> <hr/> <p>CHANGES TO THIS DRAWING SHALL BE MADE 1286.5R ON CADD ONLY. 10-02-96 LATEST CADD UPDATE: 03-10-09 GLR BY: G.BATCHELOR 9:00 AM</p>
--	---

CONCURRENCE:	/ / / /		
CONCURRENCE:	/ / / /		
CONCURRENCE:	/ / / /		
CONCURRENCE:	/ / / /		
CONCURRENCE:	JOHN R. NEBRIG		
MAINTENANCE:	/ 06 / 23 / 97 /		
CONCURRENCE:	J.H. VICK		
WORKING OFFICE:	/ 06 / 24 / 97 /		
CONCURRENCE:	M.L. McINTOSH		
ENVIRONMENTAL HEALTH:	/ 06 / 19 / 97 /		
CONCURRENCE:	DENNIS S. DAVIS		
SAFETY OFFICE:	/ 06 / 19 / 97 /		
CONCURRENCE:	M.E. MANN		
COMMUNICATIONS EQUIPMENT:	/ 06 / 18 / 97 /		

	<p>Marshall Space Flight Center Huntsville, Alabama 35812</p>
--	--

WORK REQUEST NO. 12865.R	
<p>BUILDING 4707</p> <p>INSTALL AUTOCLAVE</p> <p>ELECTRICAL POWER ONE LINE DIAGRAM & FEEDER SCHEDULE</p>	

<p>AE FIRM:</p> <p>AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA</p> <p>SUBMITTED:</p> <p>HOWARD BOZEMAN</p> <p>REV. NO.</p>	<p>APPROVAL, RECOMMENDED:</p> <p>R.B. FELDER</p> <p>ABDI DATES: 06-24-97</p> <p>DESIGNED: M. DEY</p> <p>DRAWN: G. ROGERS</p> <p>CHECKED: J.B. RHODAS</p> <p>SCALE: AS NOTED</p>	<p>NASA AE CONTRACT NO.</p> <p>NASA A8-40083</p> <p>ACCEPTED FOR CONSTRUCTION:</p> <p>J. CLARK BOAZ</p> <p>ABAI DATES: 06-25-97</p> <p>APPROVAL, RECOMMENDED:</p> <p>ARTHUR HARGROVE JR</p> <p>AJT & ASSOCIATES, INC.</p> <p>DESIGN DATES: 06-24-97</p> <p>SPEC. NO. BMMS-3</p>
--	---	--

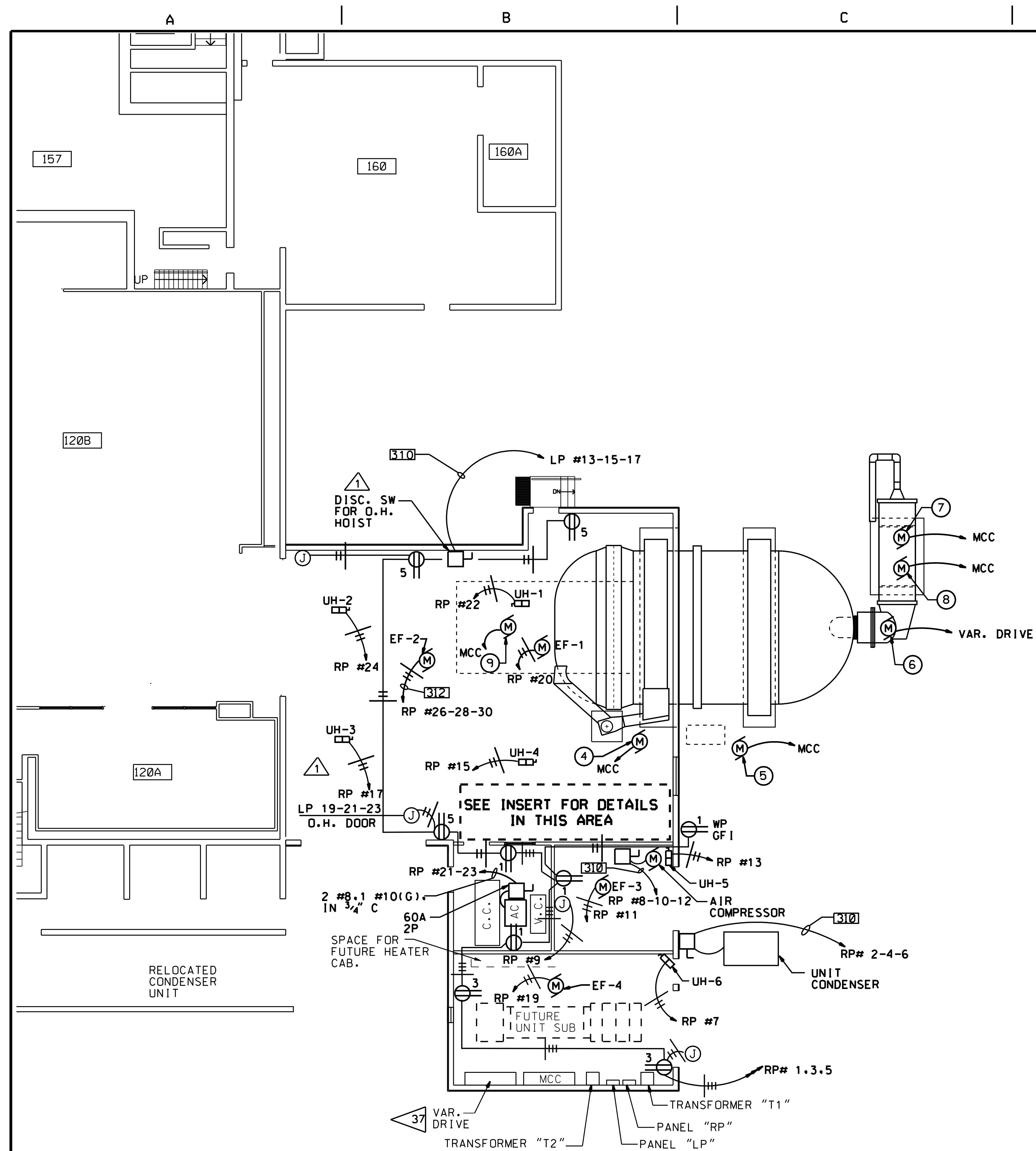
E2





OF 7

DWG NO.

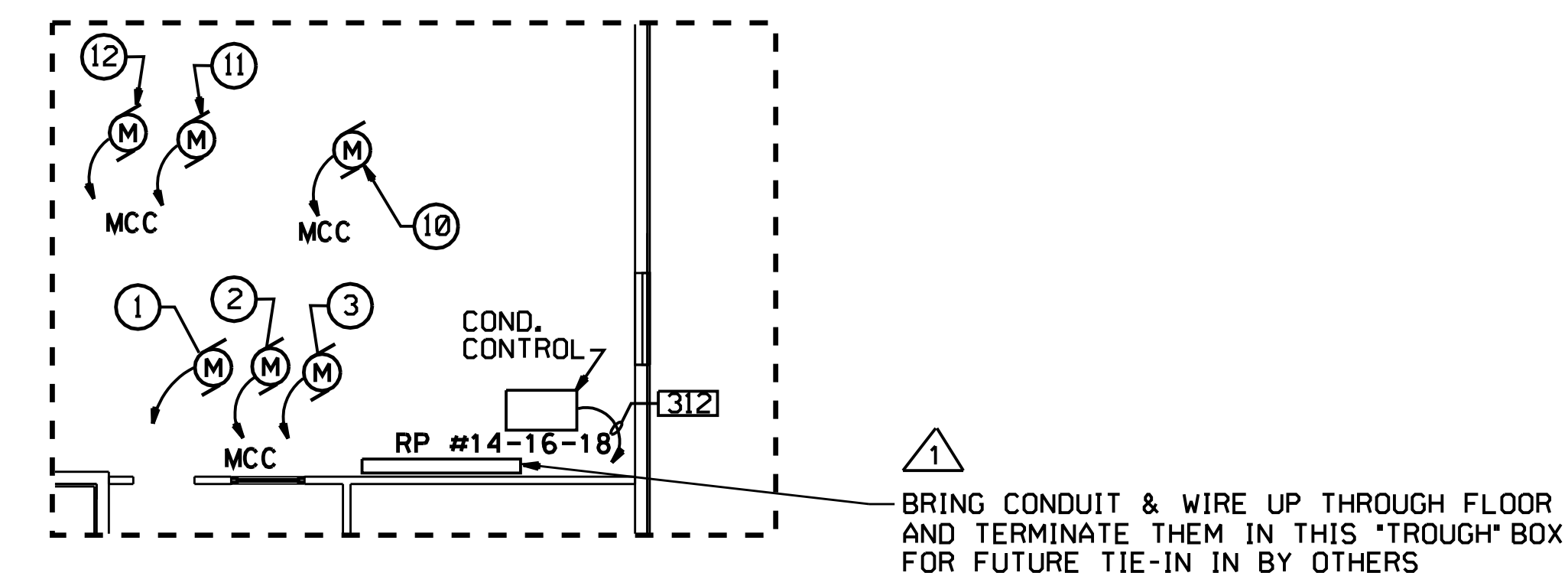
FAC-F0-4707-E2

SHEET 28 OF 30



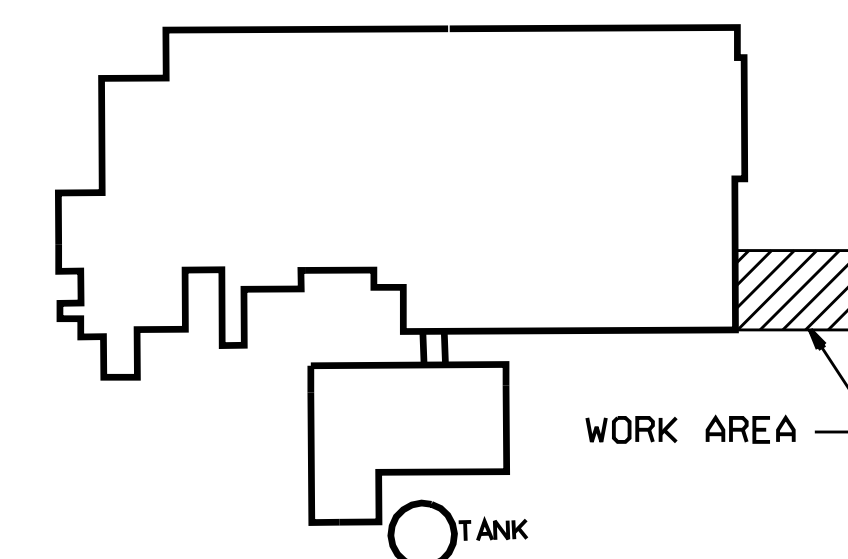
LEGEND	
	ELECTRIC MOTOR
	DISCONNECT SWITCH 30A.3P UNLESS NOTED OTHERWISE
 WP GFI	NEMA 5-20R RECEPTACLE OUTLET WP- WEATHER PROOF; GFI- GROUND FAULT INTERRUPTER NUMERAL INDICATES CIRCUIT NUMBER
	JUNCTION BOX FOR ROLL-UP DOOR POWER SUPPLY

THREE PHASE MOTOR LIST	
①	VACUUM PUMP #1 MOTOR
②	VACUUM PUMP #2 MOTOR
③	VACUUM PUMP #3 MOTOR
④	HYDRAULIC PUMP MOTOR
⑤	PURGE BLOWER MOTOR
⑥	AUTOCLAVE FAN MOTOR
⑦	COMBUSTION MASS BLOWER MOTOR
⑧	COMBUSTION AIR BLOWER
⑨	SCREWJACK MOTOR
⑩	RECIRCULATION PUMP MOTOR
⑪	COOLING WATER PUMP #1
⑫	COOLING WATER PUMP #2



ELECTRICAL POWER PLAN (INSERT)
SCALE: 1/8" = 1'-0"

1 REFERENCE DESIGN CHANGES
REVIEWED FOR INCORPORATION
RFI-065,079



 BUILDING 4707
KEY PLAN
N.T.S

 **ELECTRICAL POWER PLAN**
SCALE: 1/8" = 1'-0"

<h2 style="margin: 0;">REDUCED SIZE DRAWING</h2> <hr/> <h1 style="margin: 0;">DO NOT SCALE</h1>		<h2 style="margin: 0;">CADD DRAWING</h2> <hr/> <div style="display: flex; justify-content: space-between;"> <div> <p>CHANGES TO THIS DRAWING SHALL BE MADE 12865.R ON CADD ONLY.</p> <p>11-19-96 LATEST CADD UPDATE: 03-10-09</p> <p>GLR BY: G. BATCHELOR 09:30 AM</p> </div> </div>	
CONCURRENCE:			
CONCURRENCE:	/ / / /		
CONCURRENCE:	/ / / /		
CONCURRENCE:	/ / / /		
CONCURRENCE:	/ / / /		
CONCURRENCE:	JOHN R. NEBRIG	11/14/99	AS-BUILT PER REDLINES
MAINTENANCE	/06 /23 /97 /	REV. BY DATE	REVISION
CONCURRENCE:	J.H. WICK		
USING OFFICE	/06 /24 /97 /		
CONCURRENCE:	M.L. MCINTOSH		
ENVIRONMENTAL HEALTH	/06 /19 /97 /		
CONCURRENCE:	DENNIS S. DAVIS		
SAFETY OFFICE	/06 /19 /97 /		
CONCURRENCE:	M.E. MANN		
COMMUNICATIONS OFFICE	/06 /18 /97 /		
TELECOMMUNICATIONS EQUIPMENT AFFECTED BY THIS CONTRACT WORK IS NOT TO BE ALTERED OR REMOVED BY THE CONTRACTOR, CONTACT THE COTR IN THE EVENT OF A CONFLICT.			
REF. NO.			

NASA

Marshall Space Flight Center

Huntsville, Alabama 35812

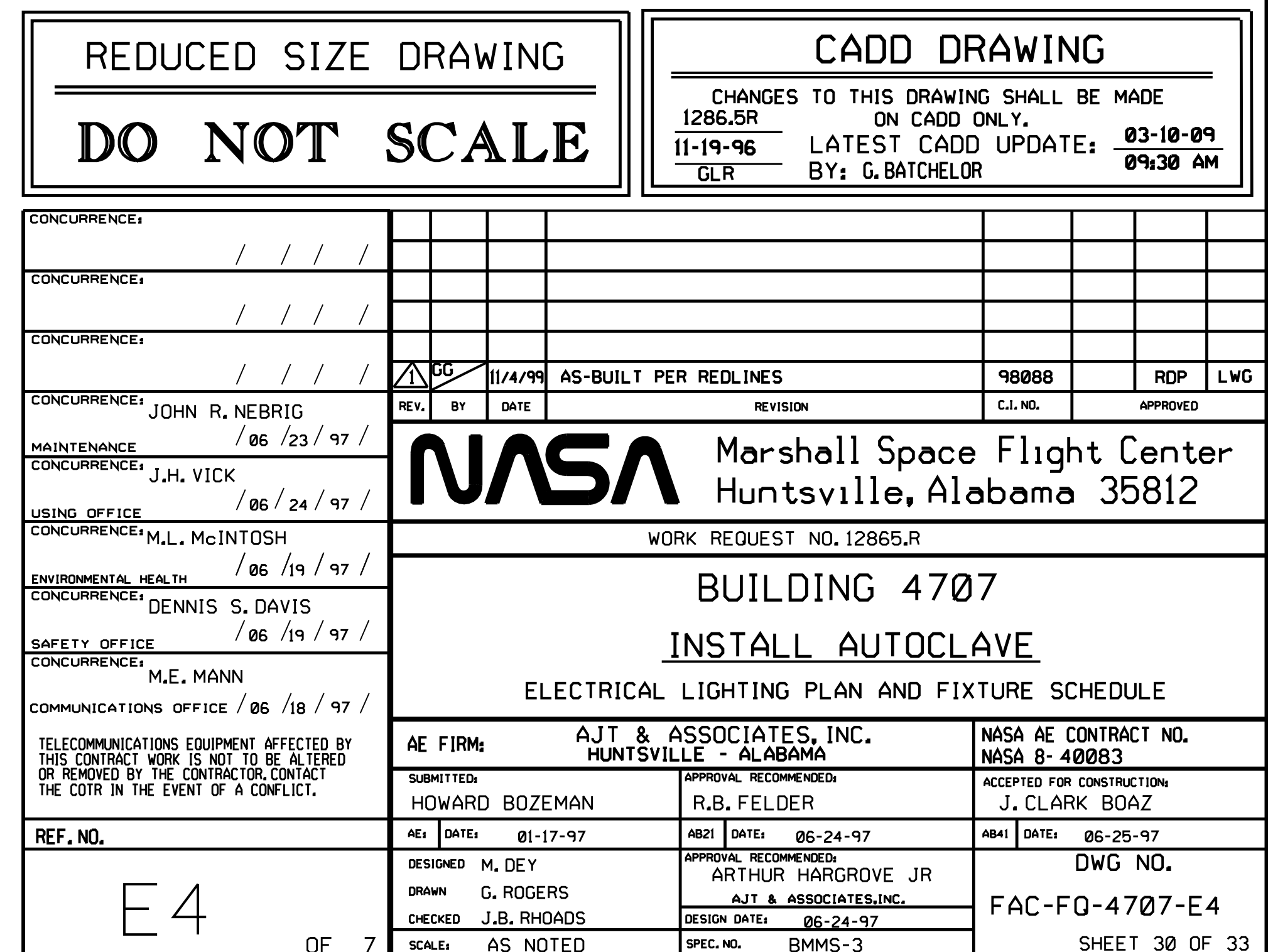
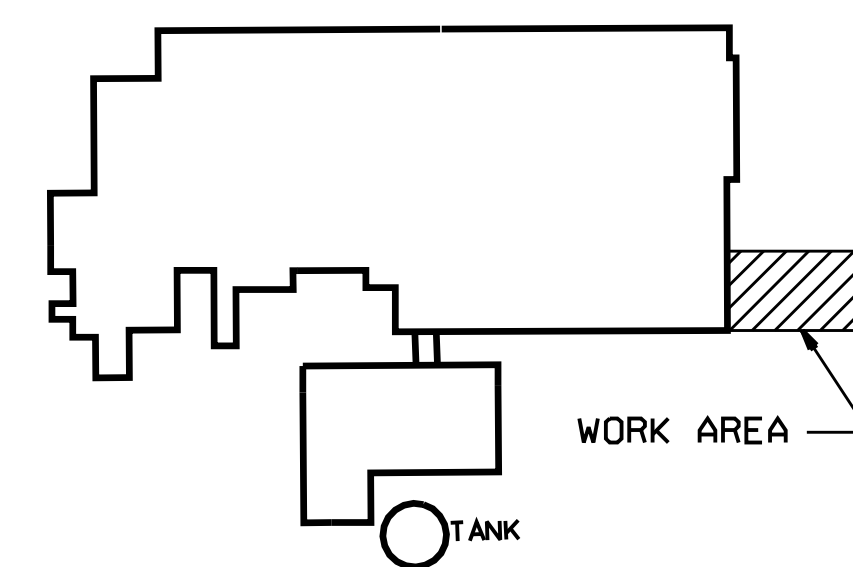
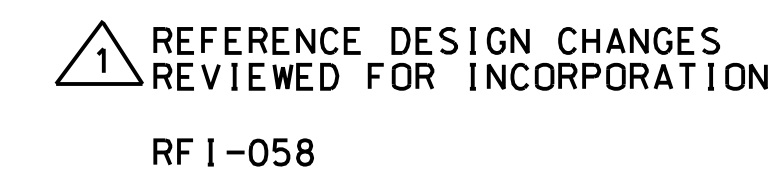
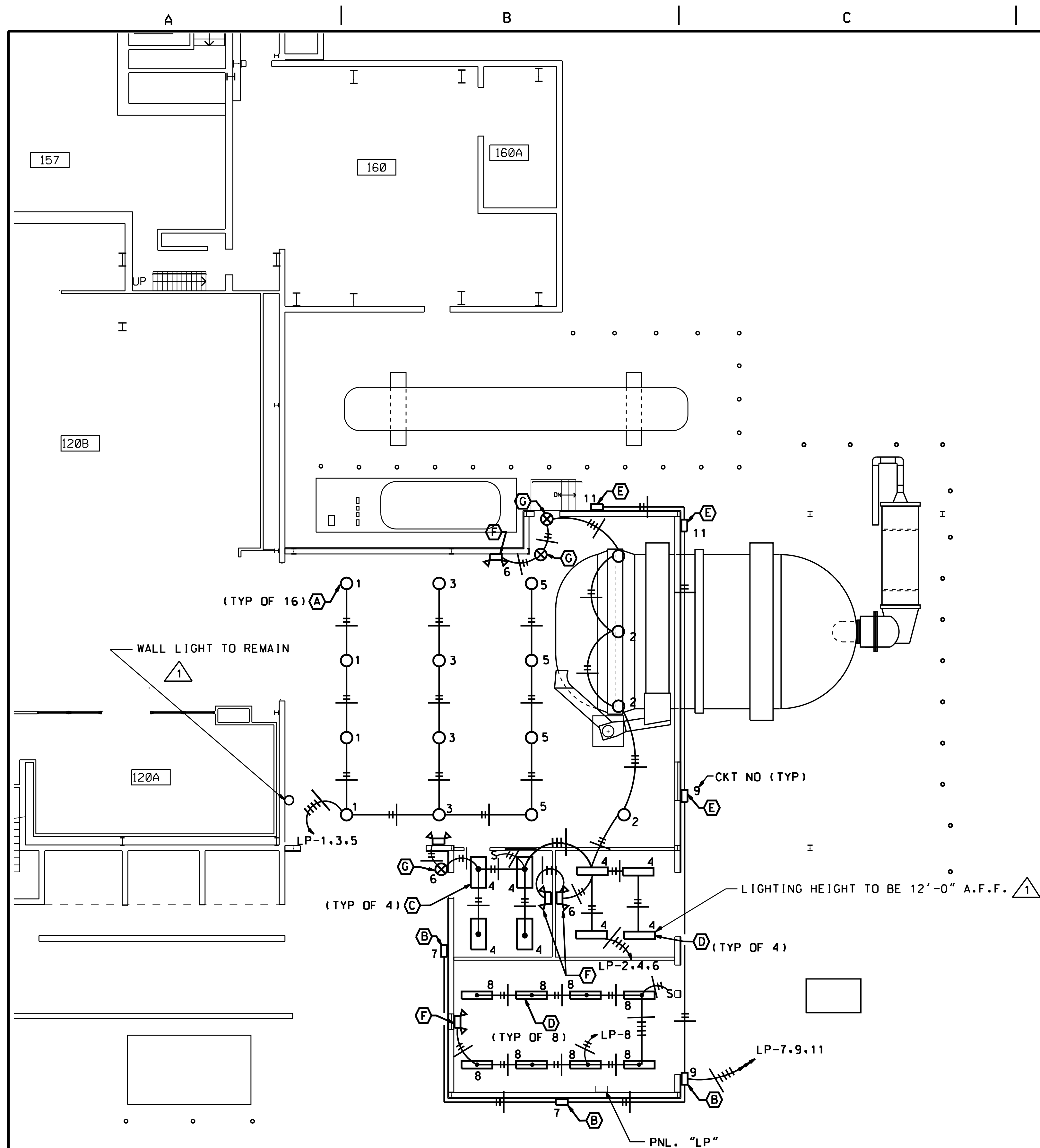
WORK REQUEST NO. 12865.R

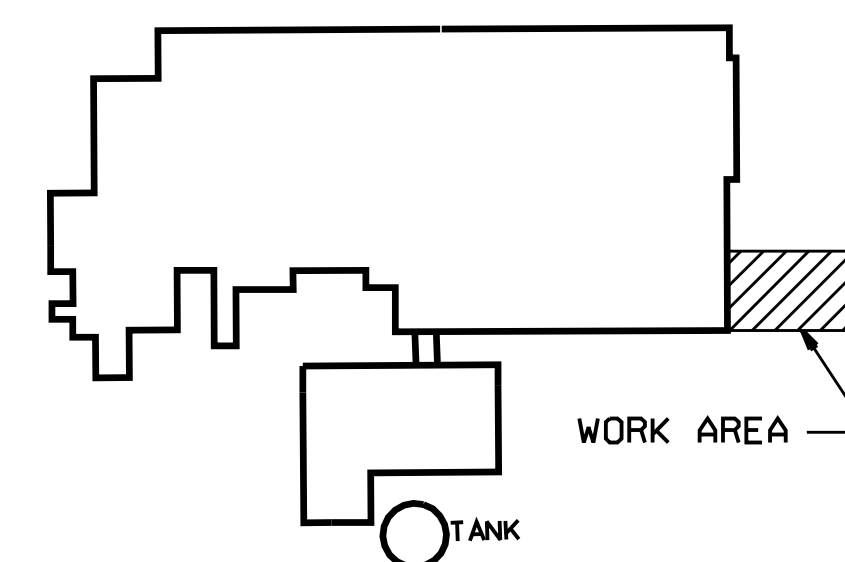
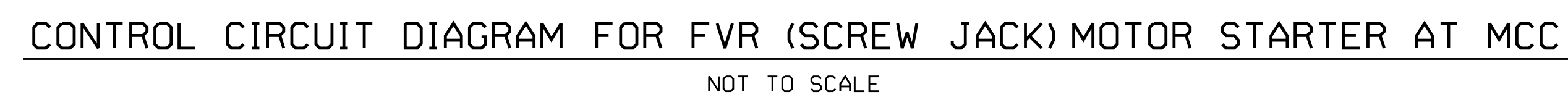
BUILDING 4707

INSTALL AUTOCLAVE

ELECTRICAL POWER PLAN

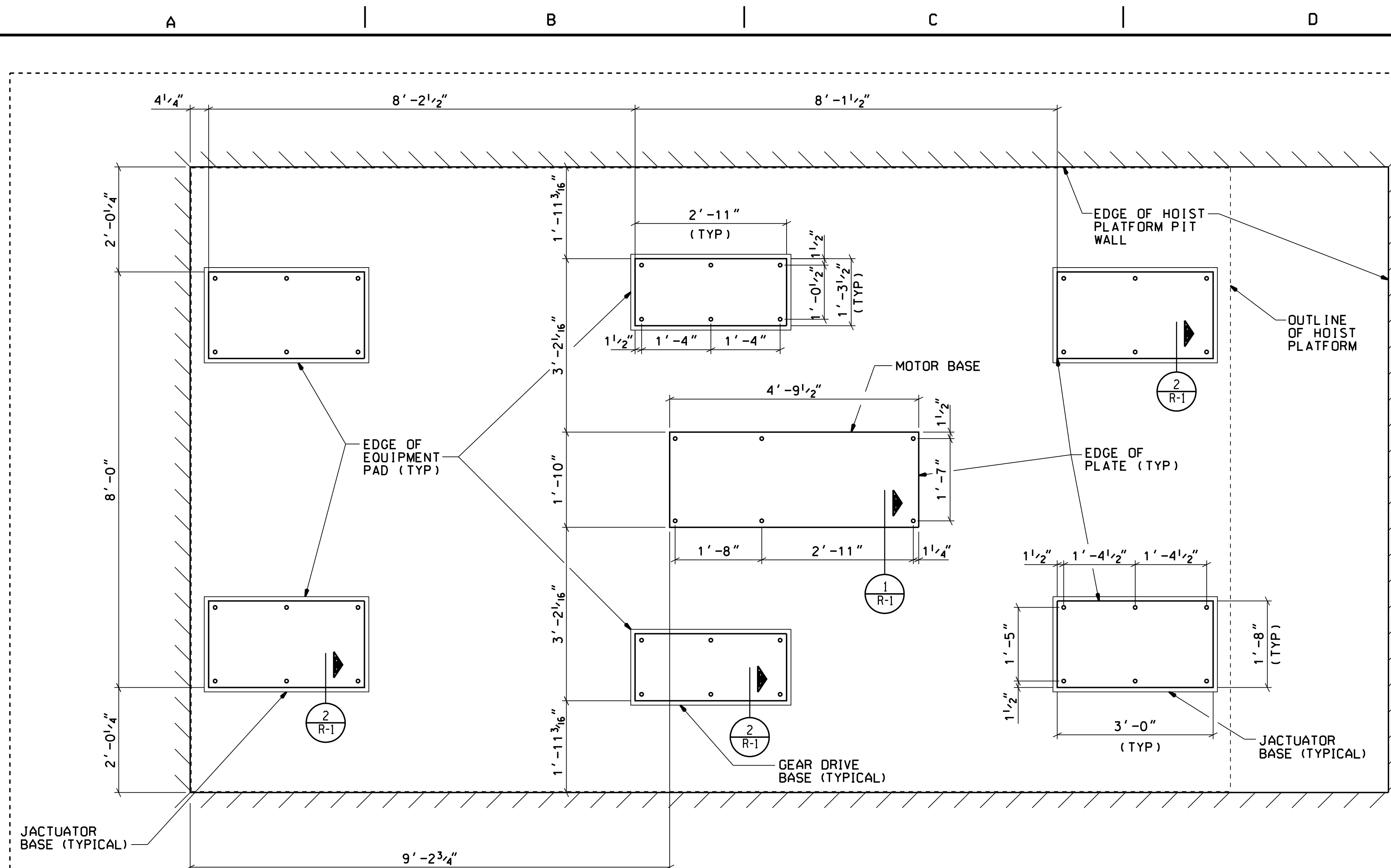
AE FIRM: AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA	APPROVAL RECOMMENDED R.B. FELDER	NASA AE CONTRACT NO. NASA 8-40083
SUBMITTED: HOWARD BOZEMAN	APPROVED J. CLARK BOAZ	ACCEPTED FOR CONSTRUCTION: J. CLARK BOAZ
REV. DATE: 06-17-97	AB01 DATE: 06-24-97	AB01 DATE: 06-25-97
DESIGNED M. DEY DRAWN G. ROGERS CHECKED J.B. RHODADS	APPROVAL RECOMMENDED ARTHUR HARGROVE JR AJT & ASSOCIATES, INC. DESIGN DATE: 06-24-97	DWG NO. FAC-F0-4707-E3
SCALE: AS NOTED	SPEC. NO. RMM5-3	SHEET 29 OF 33



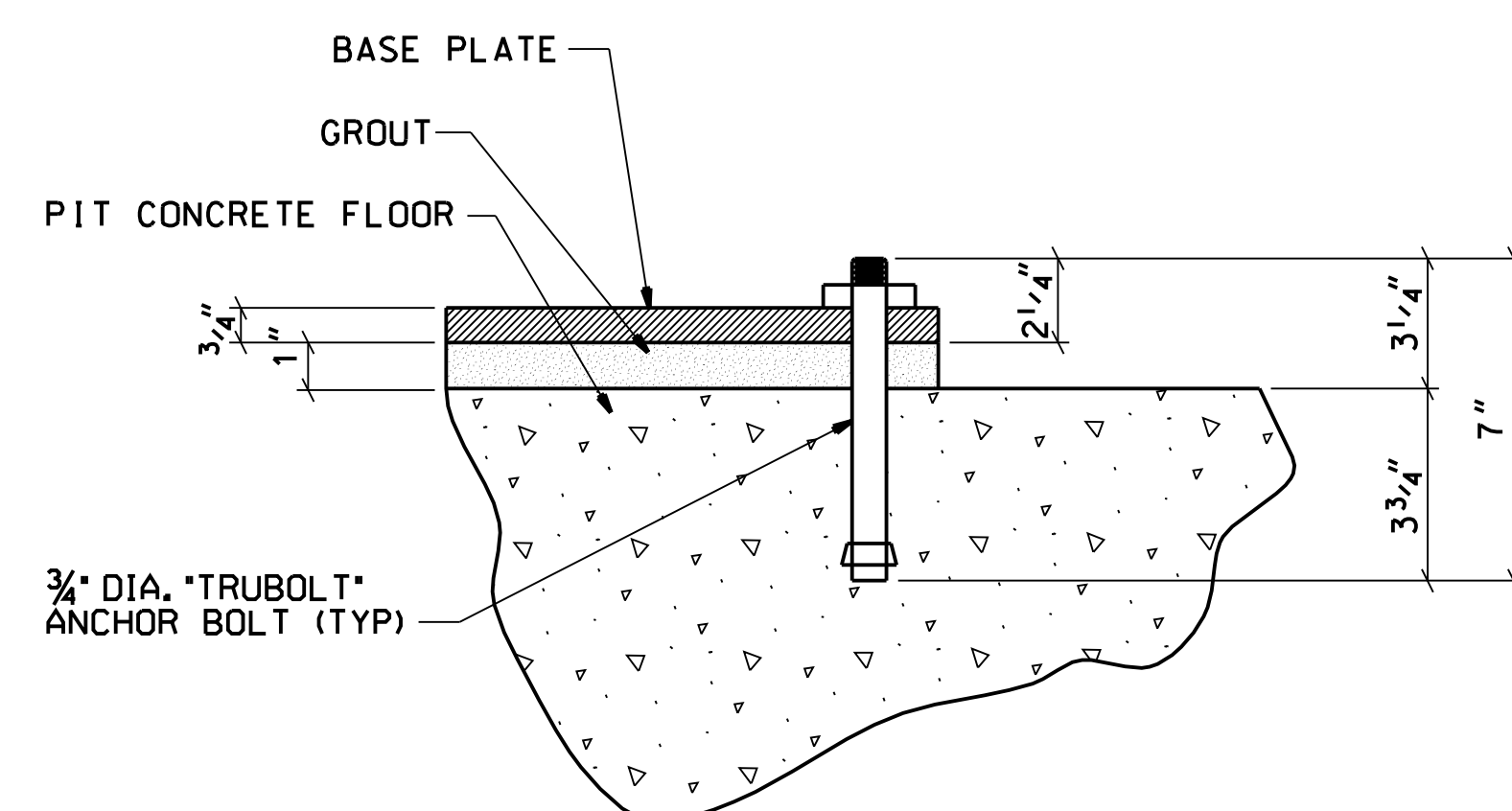


<h1 style="margin: 0;">REDUCED SIZE DRAWING</h1> <hr/> <h1 style="margin: 0;">DO NOT SCALE</h1>		<h1 style="margin: 0;">CADD DWG.</h1> <hr/> <p style="margin: 0;">CHANGES TO THIS DRAWING SHALL BE MADE 12865R ON CADD ONLY. 12-04-96 LATEST CADD UPDATE: 03-10-09 GLR BY: G. BATCHELOR 09:30 AM</p>	
CONCURRENCE:			
CONCURRENCE:	/ / / /		
CONCURRENCE:	/ / / /		
CONCURRENCE:	/ / / /		
CONCURRENCE:	JOHN R. NEBRIG	11/5/99	AS-BUILT
MAINTENANCE	/06 /23 /97 /	REV.	BY DATE
CONCURRENCE:	J.H. VICK		REVISION
USING OFFICE	/06 /24 /97 /		89888
CONCURRENCE:	M.L. McINTOSH		RDP
ENVIRONMENTAL HEALTH	/06 /19 /97 /		LWG
CONCURRENCE:	DENNIS S. DAVIS		
SAFETY OFFICE	/06 /19 /97 /		
CONCURRENCE:	M.E. MANN		
COMMUNICATIONS OFFICE	/06 /18 /97 /		
<h2 style="margin: 0;">Marshall Space Flight Center</h2> <h2 style="margin: 0;">Huntsville, Alabama 35812</h2>			
WORK REQUEST NO. 12865.R			
<h1 style="margin: 0;">BUILDING 4707</h1> <h1 style="margin: 0;">INSTALL AUTOCLAVE</h1> <h1 style="margin: 0;">MOTOR CONTROL CENTER</h1>			
<p>TELECOMMUNICATIONS EQUIPMENT AFFECTED BY THIS CONTRACT WORK IS NOT TO BE ORDERED OR REMOVED BY THE CONTRACTOR, CONTACT THE COTR IN THE EVENT OF A CONFLICT.</p>		<p>AE FIRM: AJT & ASSOCIATES, INC. HUNTSVILLE - ALABAMA</p> <p>SUBMITTED: HOWARD BOZEMAN</p> <p>APPROVAL RECOMMENDED: R.B. FELDER</p> <p>AB21 DATE: 06-24-97</p> <p>DESIGNED M. DEY</p> <p>DRAWN G. ROGERS</p> <p>CHECKED J.B. RHOADS</p> <p>SCALE: AS NOTED</p>	
<p>REF. NO.</p>		<p>NASA AE CONTRACT NO. NASA 8-40083</p> <p>ACCEPTED FOR CONSTRUCTION: J. CLARK BOAZ</p> <p>AB41 DATE: 06-25-97</p> <p>DWG NO.</p> <p>FAC-FQ-4707-E5</p> <p>SHEET 31 OF 33</p>	

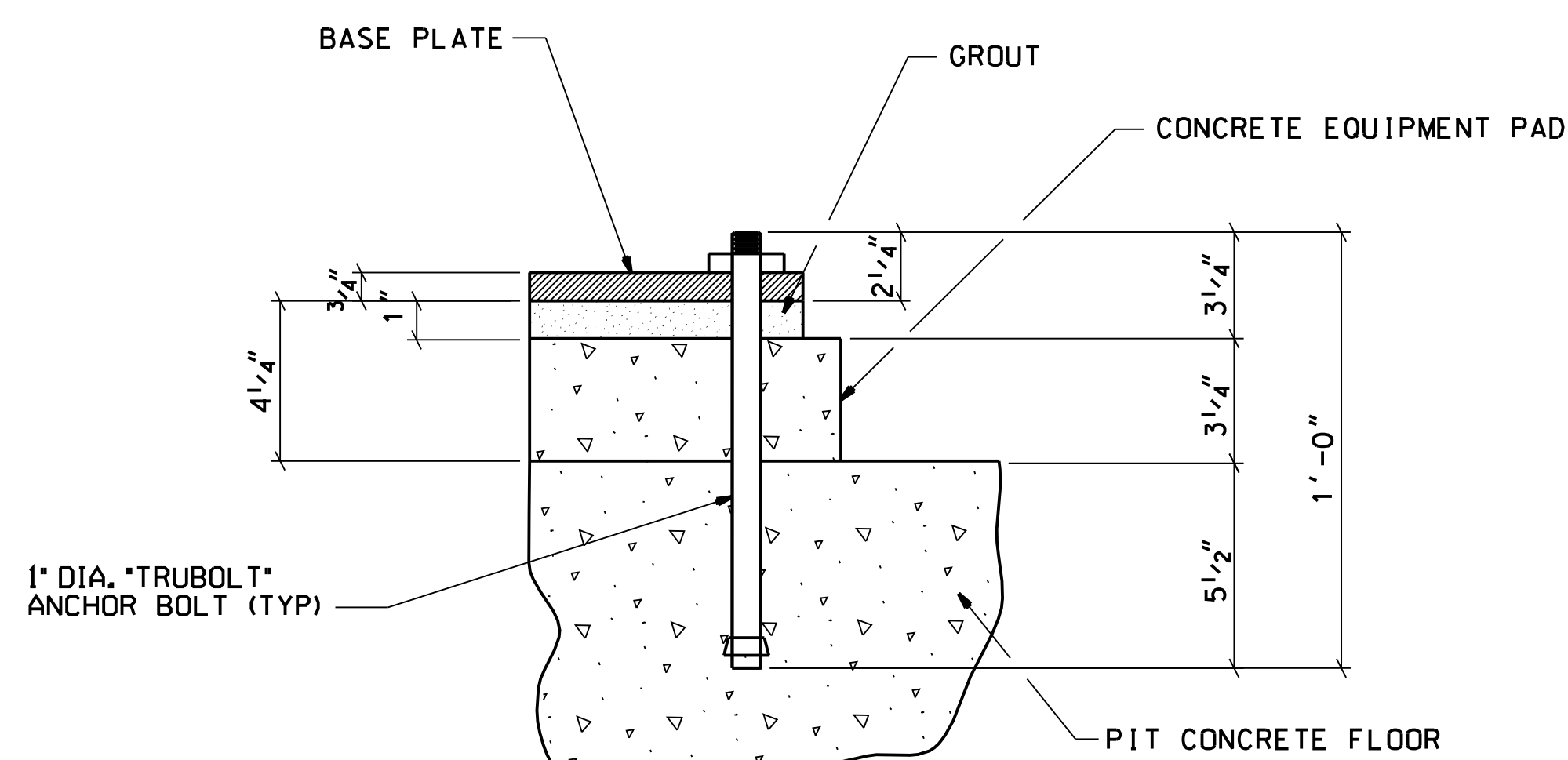
PANEL SCHEDULE															
PANEL		RP	VOLTAGE		208Y/120	MOUNTING		SURFACE	LOCATION		ELECT. RM.				
BUS		225A	3	Ø: W	4 W <th colspan="2">ENTRY</th> <td>BOTTOM</td> <td colspan="2">NOTE: ALL BREAKERS 20A, 1P</td> <td></td> <th colspan="4"></th>	ENTRY		BOTTOM	NOTE: ALL BREAKERS 20A, 1P						
MAIN		150A	AIC	10,000 (SYM)		FED FROM		XFMR 'T1'	UNLESS OTHERWISE NOTED						
CKT	P O L E	EQUIPMENT SERVED	LOAD (KVA)			CB	BUS	CB	LOAD (KVA)			EQUIPMENT SERVED	P O L E	CKT	
			AØ	BØ	CØ				AØ	BØ	CØ				
1		125V, 20A, RECP. OUTLETS	0.72			A B C	A B C	A B C	0.33			CONDENSER UNIT	2	1	
3		125V, 20A, RECP. OUTLETS		0.36						0.33					
5		125V, 20A, RECP. OUTLETS			0.54					0.33				6	
7		UH-6	0.52						1.66			COMPRESSOR DISC	8	7	
9		J-BOX FOR SAND FILTER		0.18					1.66						
11		EF-3			0.70					1.66				12	
13		UH-5	0.52						0.33			CONDENSER CONTROL	14	13	
15		UH-4		0.52					0.33						
17		UH-3			0.52					0.33				18	
19		EF-4	0.70						1.17			EF-1	20	19	
21		AC UNIT		2.60					0.52			UH-1	22		
23					2.60					0.52		UH-2	24	23	
25		O2 MONITOR PANEL	0.18						0.38			EF-2	26		
27		CONTROL PANEL		0.18						0.38				28	
29		SPACE			-					0.38				30	
31												SPACE	32	31	
33															
35														34	
37														36	
39														38	
41														40	
43														42	
			2.64	3.84	4.36	SUB-TOTAL			3.87	3.22	3.22				
CONNECTED LOAD															
AØ: 6.51		KVA = 54.25A													
BØ: 7.06		KVA = 58.83A													
CØ: 7.58		KVA = 63.16A													
ALL BUS SHALL BE 1000 APSI COPPER															
NEUTRAL BUS														<input type="checkbox"/>	X
GROUND BUS														<input type="checkbox"/>	X




SCREW JACK ANCHOR PLAN
 SCALE: $\frac{3}{4}" = 1'-0"$



1 MOTOR BASE ANCHORAGE
R-1 NOT TO SCALE



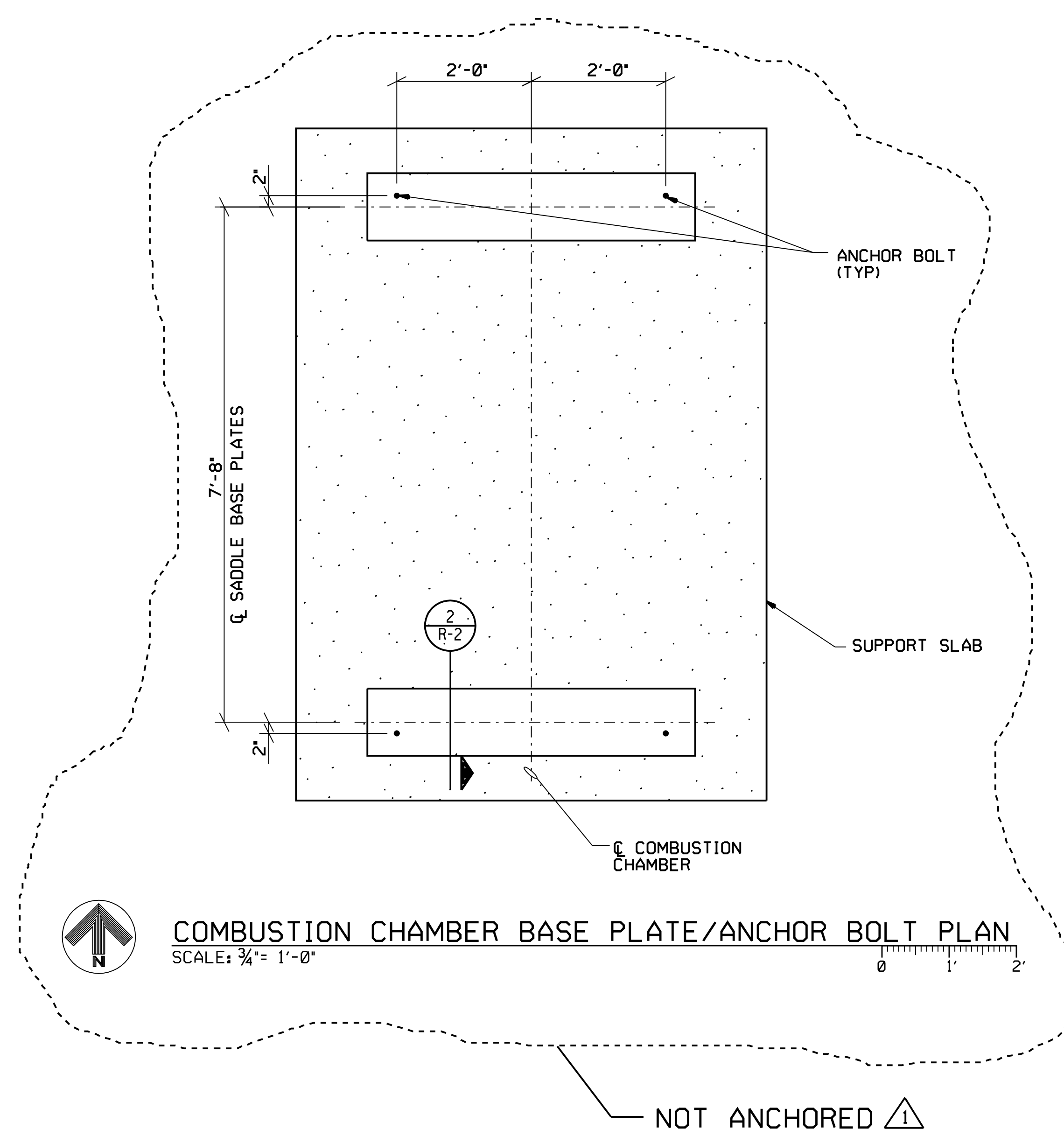
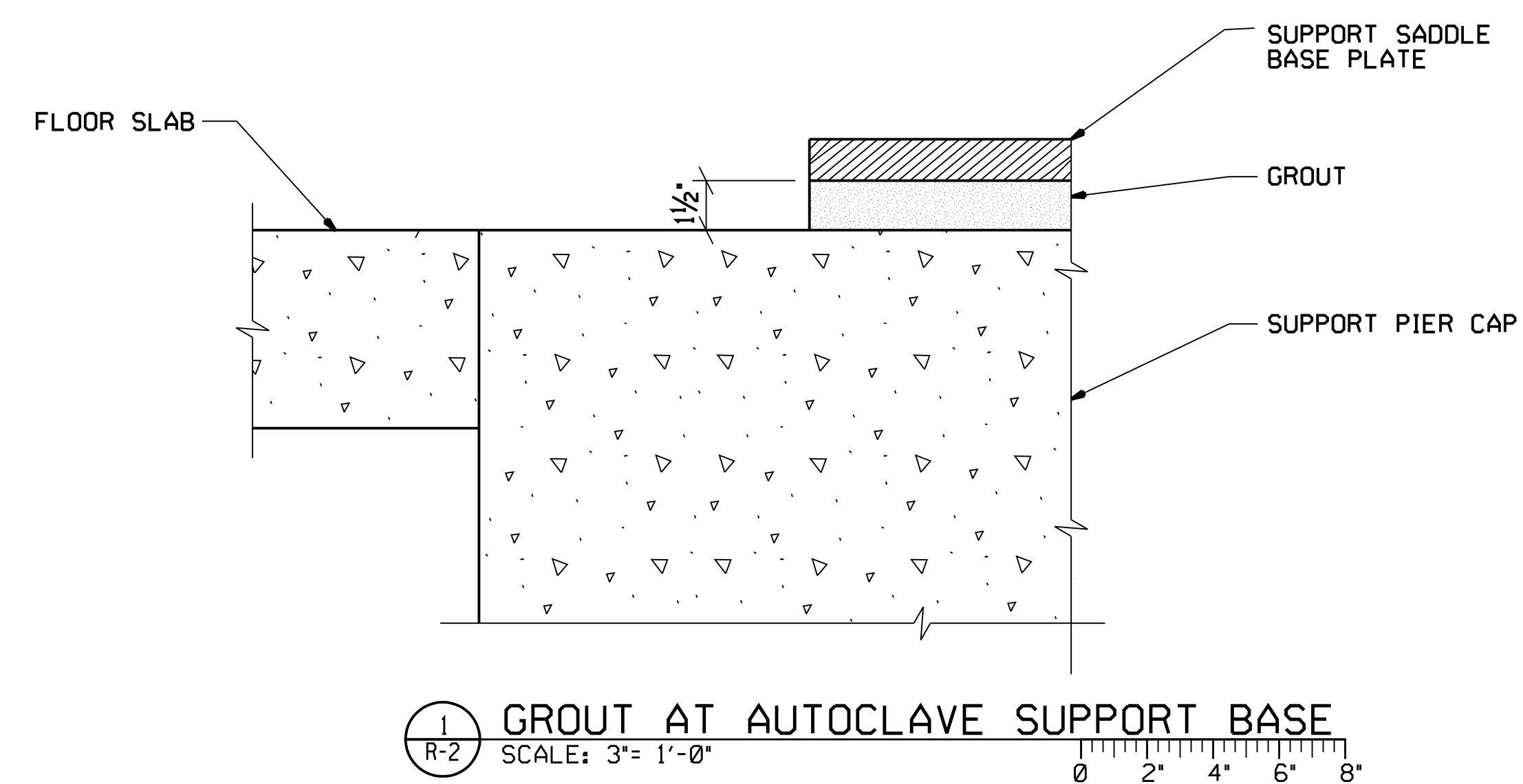
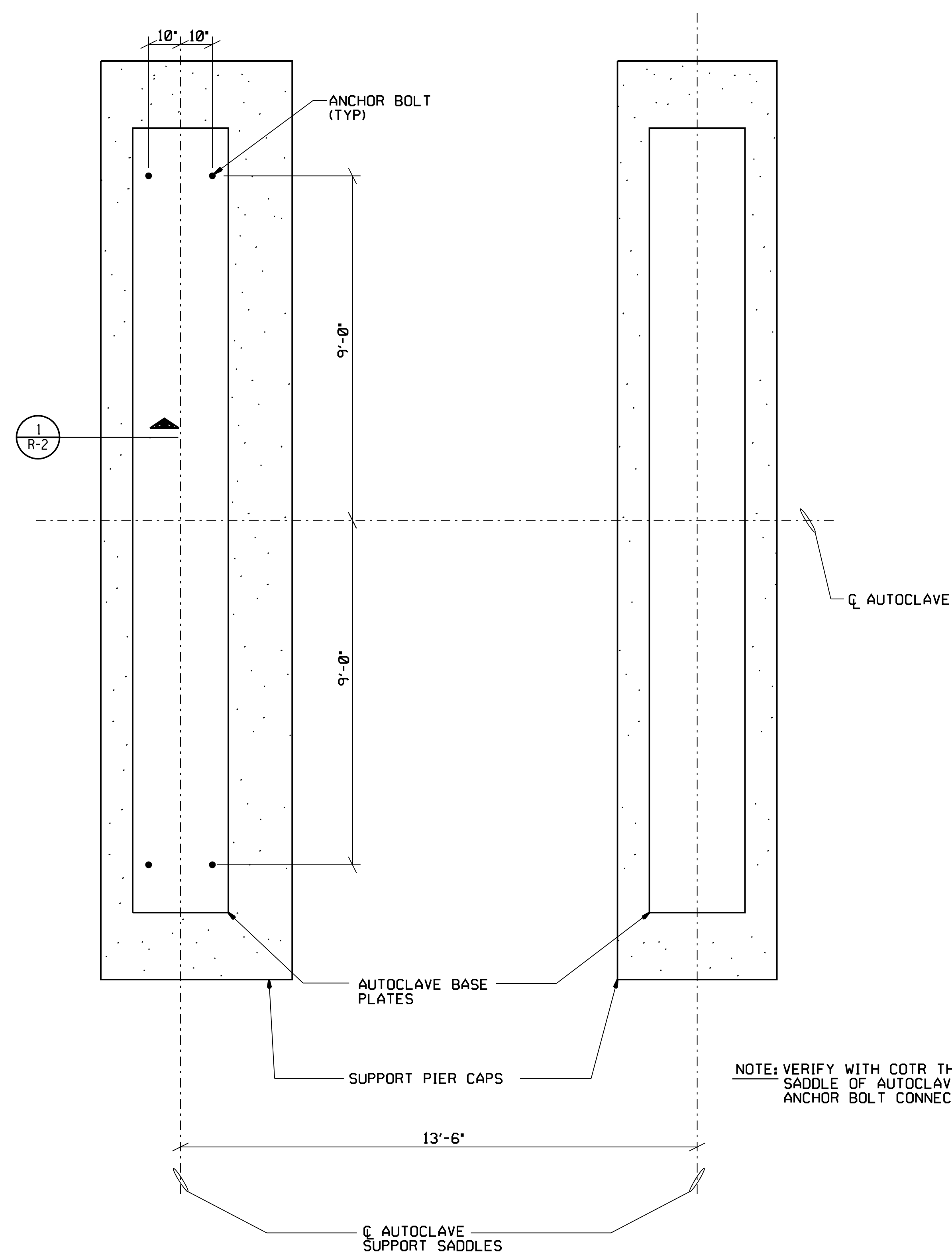
2 GEAR DRIVE/ACTUATOR BASE ANCHORAGE
R-1 NOT TO SCALE

NOTE: SEE DRAWING FAC-FQ-4707-S1 FOR HOIST PLATFORM PIT LOCATION AND DRAWING FAC-FQ-4707-S2 FOR CONCRETE, GROUT AND ANCHOR BOLT SPECIFICATIONS.

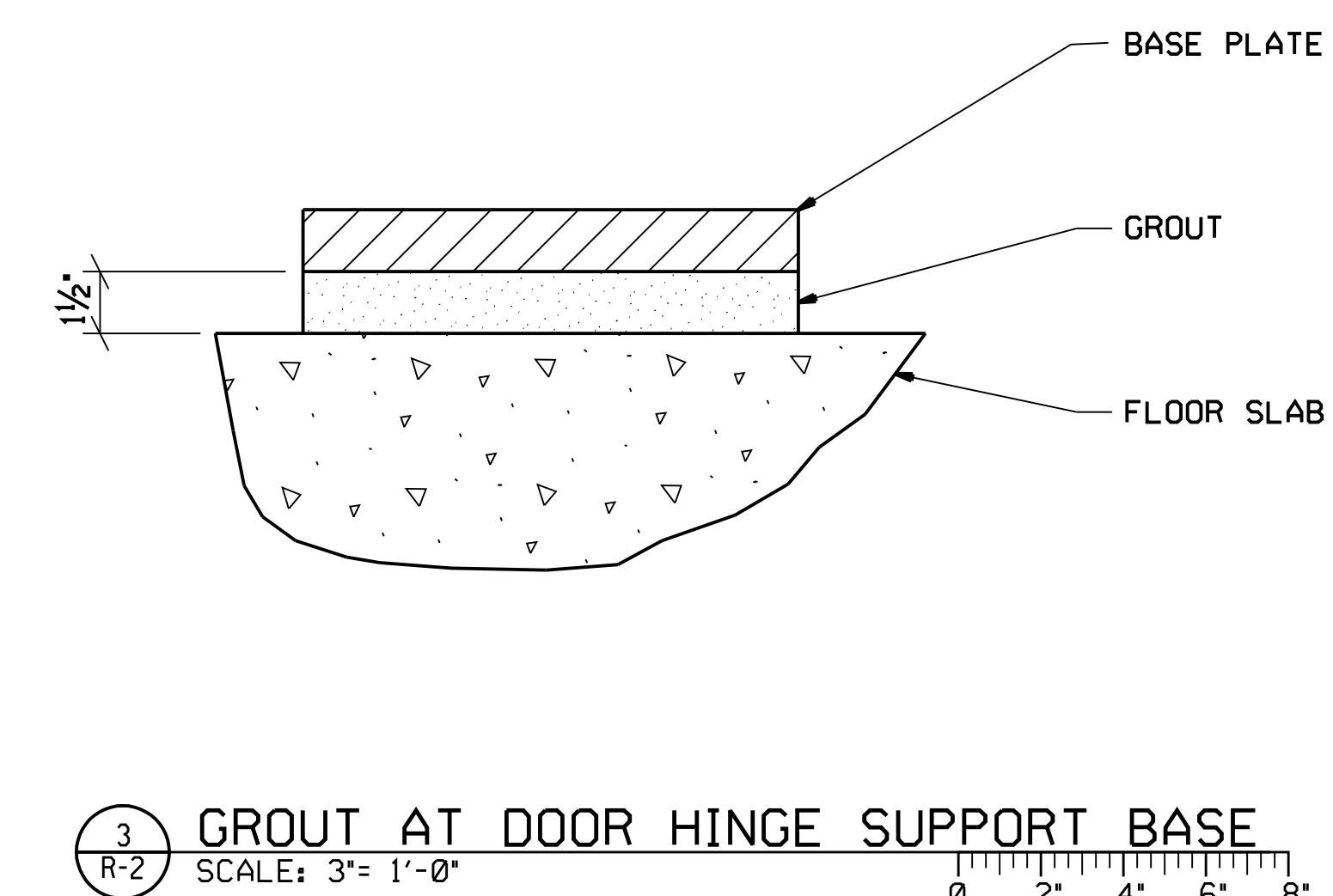
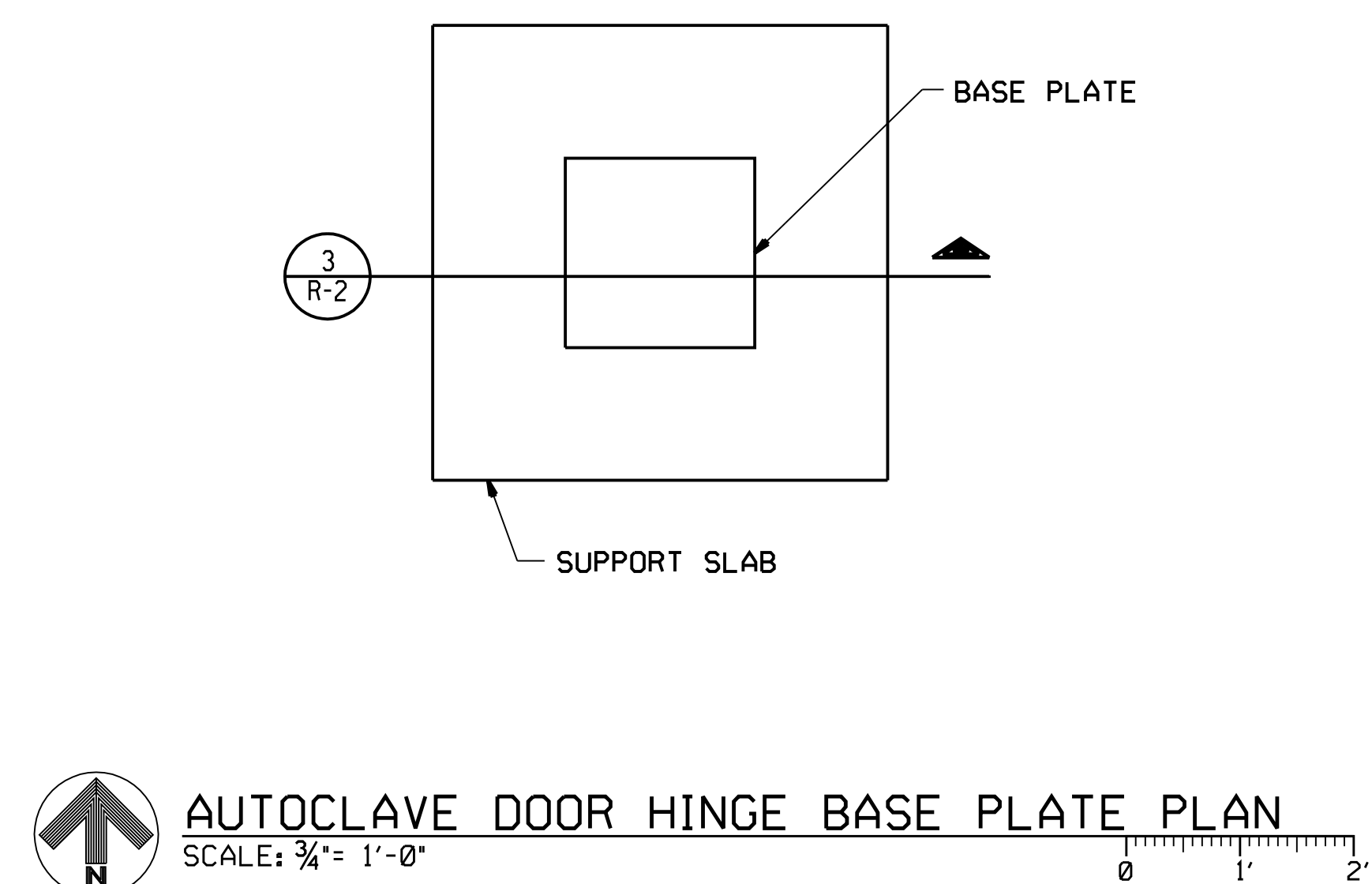
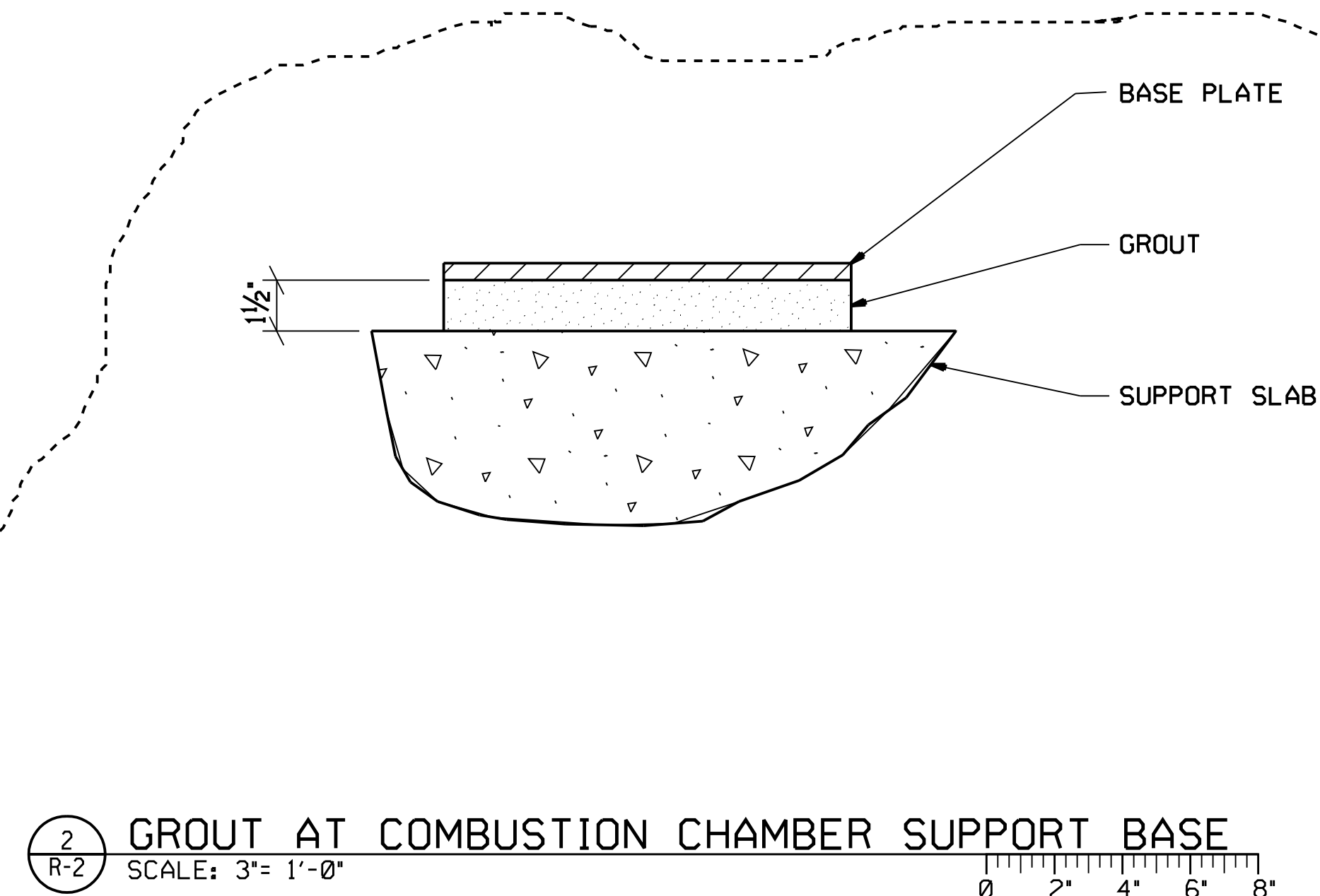
- NOTES
1. ANCHOR BOLT INSTALLATION AND/OR GROUTING OPERATIONS ARE REQUIRED FOR THE FOLLOWING GFE AUTOCLAVE EQUIPMENT:
AUTOCLAVE SUPPORT SADDLE BASE PLATES
COMBUSTION CHAMBER SUPPORT SADDLE BASE PLATES
AUTOCLAVE DOOR HINGE SUPPORT BASE PLATE
HOIST PLATFORM SCREW JACK SYSTEM BASE PLATES
 2. GROUT THICKNESSES AND ANCHOR BOLT SIZES AND LOCATIONS ARE PER AUTOCLAVE MANUFACTURER DRAWINGS OR PRELIMINARY FIELD MEASUREMENTS. VERIFY DIMENSIONS AND RELATIVE LOCATIONS AT THE SITE PRIOR TO GROUTING OPERATIONS AND ANCHOR BOLT PLACEMENT. IF DISCREPANCIES ARE NOTED, CONFIRM COURSE OF ACTION WITH THE CONTRACTING OFFICER BEFORE PROCEEDING.
 3. WHEN POSITIONING AUTOCLAVE FOR GROUTING OPERATIONS, SHIM PLATES MAY BE UTILIZED FOR LEVELING AND STABILIZING SUPPORT SADDLE BASE PLATES. MINIMUM BEARING AREA FOR EACH SHIM PLATE IS 200 SQUARE INCHES (SUGGESTED PLAN DIMENSIONS: 1' 0" - 3' 0"). SHIM PLATES WHICH CONTACT SUPPORTING CONCRETE SURFACE MUST BE A MINIMUM OF 1 INCH THICK, AND MUST BEAR COMPLETELY ON THE CONCRETE.
 4. WHEN POSITIONING EQUIPMENT OTHER THAN AUTOCLAVE FOR GROUTING, SHIM PLATES MAY BE UTILIZED FOR LEVELING AND STABILIZING. MINIMUM BEARING AREA FOR EACH SHIM PLATE IS 25 SQUARE INCHES.
 5. ALLOW A MINIMUM OF 28 DAYS FOR CONCRETE EQUIPMENT PADS TO CURE PRIOR TO BASE PLATE INSTALLATION AND GROUTING, UNLESS OTHERWISE DIRECTED BY COTR.

- N.I.C. 

[illegible]



NOTE: SEE DRAWING FAC-FQ-4707-S1 FOR LOCATIONS OF BASE MEMBERS SHOWN ON THIS SHEET. SEE DRAWING FAC-FQ-4707-S2 FOR GROUT AND ANCHOR BOLT SPECIFICATIONS.



CADD DRAWING	
CHANGES TO THIS DRAWING SHALL BE MADE 12865 ON CADD ONLY.	
07-10-97	LATEST CADD UPDATE: 11-02-99
JRW	BY: G. GORDON 10:30 AM

[illegible]